GAZETTEERS OF INDIA

TAMIL NADU STATE

TIRUNELVELI DISTRICT

Volume - I

Editor
Dr. K. S. K. VELMANI

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GAZETTEERS OF INDIA

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TIRUNELVELI DISTRICT

Volume I

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Dated : 8th August 2001

FOREWORD

The glory of the Tirunelveli district is the pride of the Tamils. The crawling clouds on the Western Ghats, the picturesque Pothigai hills and the Courtallam water falls, are the special features which make Tirunelveli unique. Tamiraparani, the life line of the district has nurtured many centres which form the cradle of civilization, on both sides of her banks. Tirunelveli was the southern capital of the Pandyas, the patrons of the Tamil Sangam and the saviours of the Tamil language.

The district consists of all the five geographical divisions referred to in Tamil literature. The Western Ghats form the Kurinji (Mountainous) region; the Kalakkadu and Mundanthurai forests form the Mullai (Forest) region; the lands watered by the Tamiraparani and other rivers fall under Marudham (Paddy fields); the Radhapuram sea coast is its Neithal land (coastal) and the teri land forms the Palai (desert) region. The district is multi religious in nature as there are Saivite, Vaishnavite, Christian and Islamic centres of divinity and fame. Tirunelveli and Courtallam, are the two of the eight divine stages where Lord Siva is said to have enacted His cosmic dance.

Nature has been kind enough to bestow the district with the lofty Western Ghats, lush green forests, rivers and water falls, varied flora and fauna and the pearl fishery coast, which all contribute to make it a veritable treasure-house of natural bounty.

Many popular leaders and luminaries who were freedom fighters, novelists, writers, poets, scholars, journalists, artists, industrialists, leaders of the Dravidian and Self Respect Movements, Religious and Bhakthi movements, hailed from this district.

The land of Tirunelveli, known for its patriotic fervour and martyrdom, gave birth to Palayakars who raised their swords against the Colonial power. Pulithevar is an outstanding son of the soil, who struck terror in the minds of the British.

The Palayamkottai prison plays a significant role in the Freedom Movement. All the Palayakars who resisted the Colonial rule were incarcerated in it. It was under this roof that the aborted South Indian Rebellion of 1800-1801, considered to be the precursor of the Vellore Mutiny of 1806 and the Indian Rebellion of 1857 was devised by the brothers of Veera Pandya Kattabomman of Panchalamkurichi (which now falls within the Thoothukkudi district).

Tirunelveli district is compared to West Bengal in the rise of extremism and Swadeshism in the course of the National Movement. V.O.Chidambaranar and Bharathiyar, though they hailed from Thoothukkudi district, enacted many a struggle in Tirunelveli town. The town was visited by most of the national leaders.

Vanchinathan, who assassinated Ashe, the British Collector who tortured V.O.Chidambaranar and his compatriots, hailed from Sengottai of this district.

All of the above features and the other cyclopaedic information of the district have been picturised in the Gazetteer, that is being published now.

I sincerely hope that it will serve its purpose to the public, researchers, administrators and the scholars. The academics, in my view, should make every attempt to spread the message of this publication. I congratulate the Department for bringing out this Gazetteer perfectly.

M. Thambidurai

8th August 2001 **(M. THAMBIDURAI)**

INTRODUCTION

Tirunelveli district has a chequered history and heritage. The pre-historic civilization flourished in Adhichanallur and its suburbs. The Pandyas, one of the three Tamil monarchs of ancient and medieval Tamil Nadu and the patrons of Tamil Sangam as well, were the lords of the land except for a brief interlude of the Cholas. Though the Vijayanagar Chieftains, the Nayaks, became the masters of the land by the fourteenth century, the scions of the Pandyas, remained as rulers of the hegemony which roughly corresponded to the Tirunelveli district with Tenkasi or Tirunelveli as their capital. History records them as Tirunelveli or Tenkasi Pandyas. The Nayak's rule came to an end in Tamil Nadu in 1736 when Rani Meenakshi, the last ruler of the Nayaks was treacherously defeated by Chanda Sahib. Following this episode, were the Carnatic wars which resulted in the meteoric rise and fall of the Arcot Nawabs. For the help rendered by the English East India Company to Mohammed Ali recognising him as Nawab against Chanda Sahib, his rival who enjoyed the French support, Mohammed Ali granted the tax collecting right and later the entire administration of Tamil Nadu including Tirunelveli.

Having passed into the hands of the East India Company, they carved out Tirunelveli District by 1781. Since then, many territorial and administrative changes and re-arrangements have been made including the creation of Ramanathapuram district in 1911, and the bifurcation of the composite district into the present Tirunelveli and Thoothukkudi districts in 1986.

Tamiraparani, one of the five illustrious rivers of Tamil Nadu, serves as the lifeline of the district. The mat weaving Industry in Pathamadai has global recognition. Many ancient and medieval foreign travellers visited the places and left their accounts.

Besides the Pandyas and the Cholas who were the great builders of temples, the other historical heroes most associated with

the district are Krishnappa Nayak, the brain behind the Krishnapuram sculptures, Adhiveera Rama Pandya, the scholar king, Yusuf Khan, the indomitable rebel Commandant, Pulithevar, Veera Pandya Kattabomman and Sundaralingam who sowed the seeds of anti-colonial movements and watered and manured them with their blood and soul. Many heroic Palayakars and soldiers who shed their blood for the cause of nationalism, Bishop Caldwell and Veeramamunivar, (Beshi) the English and Persian sons of the Tamil Mother whose services to the Tamil language and literature, will be ever remembered ; Vanchinathan whose extremism and sacrifice touched everybody's heart is a celebrity. These people's contributions have been highlighted appropriately in the Gazetteer.

The western ghats, rocks, hills, cliffs and peaks, cascades and waterfalls, forests, wildlife and birds sanctuaries, rivers and rivulets and palmyra groves are the nature's bounteous gifts to the district.

The Government of Tamil Nadu continue the tradition of writing and publishing gazetteers on the districts periodically. Now all the larger districts in the State have either been bifurcated or trifurcated and the newly demarcated districts will have new gazetteers.

The Gazetteer literature for the composite Tirunelveli district is so rich that it has a Manual authored by A.J.Stuart (1879) and a *Gazetteer* written by H.R.Pate (1917). Besides Government publications, there are several works on Tirunelveli including the *History of Tinnevelly,* (1881) the *magnum opus* of Bishop R.Caldwell.

The editorial staff headed by the Editor collect the information from Archives, Government offices, libraries, private collections, scholars, etc., and prepare the draft under the supervision of the Commissioner of Archives. The draft is approved by the Gazetteer Monitoring Committee consisting of the Secretary, Higher Education Department, as Chairperson; Secretary, Revenue Department, Commissioner, Revenue Administration, Professor and Head of

Department of History, Madras University as the Members and with the Commissioner of Archives as its Member Secretary. After the approval of the Monitoring Committee and the Government, the Gazetteer is published. As the Member Secretary, I dedicate my whole hearted thanks to the Members of the Committee for having spared their precious time to go through the draft of every Gazetteer.

The Tirunelveli district Gazetteer, being published now, is the first Gazetteer for the bifurcated Tirunelveli district. The Editorial team headed by Dr.K.S.K.Velmani, had toiled hard to bring out this volume. Though the collection of particulars and the preparation of the Gazetteer was started under the supervision of my predecessors, the draft was finalised under my guidance. I congratulate the team of Assistant Editors and other staff of Gazetteer section, captained by the Editor for having done this prestigious work. A separate Gazetteer on Thoothukkudi District which was born from the composite Tirunelveli district will be published shortly.

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K.INBASAGARAN
Special Commissioner &
Commissioner of Archives
and Historical Research.

PREFACE

Blessed by the river Tamiraparani and the picturesque Western Ghats the historic Tirunelveli district stands bifurcated into Tirunelveli and Thoothukkudi districts since 1986 for the benefit of the people and administration. This is the first Gazetteer published by the Government of Tamil Nadu for the newly carved Tirunelveli district.

It is history that the Tirunelveli district, then called as *Thenpandinadu* or *Tirunelveli seemai*, was divided into petty principalities called *Palayams* under the governance of the Palayakars owing allegiance to the Nayaks. When the political influence of the English East India Company was growing the sovereignity of the Nayaks declined and the power of the Nawabs rose, backed by the Company. The Palayakars split into two groups viz., the pro-British and the anti British. In the wars between the Palayakars and the East India Company on behalf of the Nawab for the supremacy of the territory, the anti British Palayakars thrusted heroic resistance but gave up due to their disunity and modern artillary used by the alien power. Having acquired the territory, the East India Company demarcated it into a unit of administration called *district.* Thus the (revenue) district came into being. The district, headed by the Collector, was divided into taluks headed by Tahsildars. The taluks in turn were divided into *Firkas* and left in charge of Revenue Inspectors. The groups of revenue villages formed firkas. The villages were headed by Village Headmen. This system of administration got evolved in the late eighteenth century and attained perfection in the early nineteenth century. This system of district administration continues till today with minor changes.

The Government of Madras Presidency prepared Manuals for each district and the prime objective of the District Manual was to serve as a guide book to the administrators. Such a Manual was prepared for Tirunelveli district in 1879 by A.J.Stuart. Later, the Manual was revised and rechristened as Gazetteer with improved contents. The first Gazetteer for Tirunelveli district was written in 1917 by H.R.Pate. The authors of the Manual and Gazetteer were senior civil service officers. They were

foreigners and bureaucrats and their approach was obvious. After Independence, the Gazetteers are written with broader perspective, highlighting the welfare schemes of the Government implemented in the district, part played by the district in the National Movement, services of the Voluntary Social Service Organisations, economic viability and trend in the district, industrial, commercial, ágricultural and banking facilities, educational improvements, spread of literacy, medical and communication facilities, implementation of Panchayat Raj, major law and order problems and other information peculiar or exclusive to the district. The part played by the Tirunelveli district in the country's freedom struggle is written in red letters in the history. Pulithevar's martyrdom, Veerapandya Kattabomman's courage and conviction, Umaithurai's military wisdom, Sundaralingam and Marudhu brothers' sacrifices, loyalties of numerous generals and soldiers in the services of the anti-colonial Palayakars, V.O.Chidambaranar's nationalistic fervour, Vanchinathan's vengeful patriotism and the roles of the innumerable freedom fighters from the district are the invaluable assets left by them to be bequeathed by the nation.

The Gazetteers are presented in 19 chapters as outlined by the Central Gazetteer Unit. As per the discretion given to the editors of the Gazetteers by the Central Gazetteer Unit, the chapters, *Economic Trends* and *Miscellaneous Occupation* have been clubbed together to form one chapter and likewise the chapters *Other Departments, and Other Social Services,* for the reason that the information to be furnished for the combined chapters are alike and inter related. Thus, this Gazetteer comprises of 17 chapters.

Data and materials for the Gazetteer have been collected upto 1997-98 from various sources, the chief among them are archival records (Tamil Nadu Archives), libraries, offices of the heads of departments in Chennai, all the regional and district level offices in Tirunelveli, Collectorate record room, Tirunelveli, private archives and collections, and newspaper offices.

With the guidance and encouragement of the former Special Commissioners of Archives, Thiru.M Paramasivam, I.A.S., and Tmt. C.K.Gariyali, I.A.S. a Seminar on the Socio Politico Cultural and Economic History of Tirunelveli District was organised in collaboration with the Manonmaniam Sundaranar University in 1997 as a maiden effort and the research papers presented in the seminar were fully utilised as source materials for the Gazetteer. I have to thank Dr.Tmt.V. Vasanthi Devi, the then Vice Chancellor of Manonmaniam Sundaranar University, Dr.P.Sadasivam, Head, Department of History, the convenor of the Seminar, Dr.K.A.Mani Kumar, Reader, Department of History, Manonmaniam Sundaranar University, the Local Secretary of the Seminar and other professors, scholars and students who participated in the seminar, for helping me to have access to several scholars for their research papers.

I express my sincere thanks to the former Collectors of the District, Thiruvalargal P.Velu, I.A.S., R.Jayaraman, I.A.S., Dr.Niranjan Mardi, I.A.S., and the present Collector Thiru. K.Dhanavel, I.A.S., and other officers of the departments of Revenue, Rural Development, Forest, Public Works, Police, Judicial, Hindu Religious and Charitable Endowment, Archaeology, Museum, Co-operation, Public Health, Prison, Municipal Administration, Transport, Employment and Training, Agriculture, Industries, Survey, School Education, Collegiate Education, Technical Education, Legal Education, Medical Education, and other district level officers of the Government of Tamil Nadu, the Central Government officers, including Railway, Post Offices, All India Radio, Customs and Central Excise,Officers of Lead Bank, State Bank and other banks and Officers of the Public Sector Undertakings in the district for their help, cooperation and valuable assistance in furnishing suitable information for the Gazetteer.

The erudite services of Dr.P.Jagadeesan,Vice-Chancellor, Bharathidasan University, Tiruchirappalli (Member Gazetteer Monitoring Committee), Prof.Thiru. A.Sivasubramaniam, Department of Tamil, V.O.C College, Thoothukkudi, Dr.K.A.Mani Kumar, Department of History, Manonmaniam Sundaranar University, Tirunelveli Dr.N.Rajendran, Faculty

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Dr.A.N.Henry, Joint Director (Retd), Botanical Survey of India, Coimbatore, and Dr.S.D.Lourdu, Honorary Director, Folklore Resources Research Centre, St.Xavier's College, Palayamkottai deserve special mention as the former was entrusted with the preparation of a survey report on the ***Flora of the district*** and the latter with the ***People and Folklore*** of the District. These reports find place in the Gazetteer in the chapters on ***General*** and ***People*** respectively.

The linguistic peculiarities of the district was surveyed long back by the department of linguistics, Annamalai University headed by Dr.S.Agasthialingom. The survey report is appended to the chapter on *People* and I profoundly thank Dr.S.Agasthialingom and his team of scholars for their valuable services rendered to the Gazetteer. The scientists of the Zoological Survey of India, Southern Zone, Chennai deserve my special acknowledgement for the report on the Fauna of the district which form part of the chapter on *General*.I thank Dr.Albert Rajendran, a St.John's College,Palayamkottai, as he has also made contributions on this subject. Dr.B.V.Chelladurai, Research Officer, Govenment Siddha Medical College, Palayamkottai, has also assisted in the Gazetteer preparation by providing a valuable note on the Medicinal Plants in the district.

The Indian Meteorological Survey, Pune, and the Indian Geological Survey, Chennai have contributed notes on the *climate* and *geology* of the district respectively. I dedicate my thanks to these Departments also. Maps for the Gazetteers are prepared by the Department of Survey and Settlement, Government of Tamil Nadu. I take this opportunity to thank them for their neat execution of the Maps for the Gazetteer.

Besides, my sincere thanks are due to all the Principals of the Colleges of the district and the heads of other Educational Institutions for their help in the collection of sources for the Gazetteer.

Above all, I wish to reiterate the guidance and encouragement extended to the editorial staff by the former Special Commissioners and Commissioner of Archives, Thiru.M.Paramasivam,I.A.S., and Tmt.C.K.Gariyali,I.A.S., and the present Special Commissioner and Commissioner of Archives Thiru.K.Inbasagaran,I.A.S., which made this work possible. I ever remain thankful and grateful to them.

It is my bounden duty to express my thanks to my Assistant Editors,Thiru. A.Sinnakani, Tmt.V. Manmathavalli, Thiru. N. Govindaraju, Tmt. A. Nalini, and Thiru. A.Tamilselvan for their unstinting cooperation in completing the draft of the Gazetteer and their aptitude and astuteness.The valuable assistance of Thiru. M.P.Raghunathan, and Thiru. L.A.Nandakumar, Superintendents, Tmt. A.Vasantha, P.A. to Editor, Tmt.S.Gomathi, Stenographer, Thiru. G.Narendran, Grade-I, Typist, Thiru. A.V.Srinivasan, Assistant, Thiru. A. Chandrasekaran, Senior Reader, Tmt.P.Geetha, Copy Holder, in the collection of source materials, making manuscripts into printed draft by using D.T.P system and proof reading deserve to be applauded.

It was due to the great efforts of Tmt.C.K.Gariyali,I.A.S., former Special Commissioner, a D.T.P system could be installed in the Gazetteer Section. For this, I have to thank the Government of Tamil Nadu and Tmt.C.K.Gariyali. I.A.S. This is the first Gazetteer processed in the D.T.P. unit. Thiru.L.A.Nandakumar, Tmt.S.Gomathi, Tmt.A.Vasantha, and Thiru.G.Narendran, staff of the Gazetteer section, trained in the application of D.T.P system used their skills in preparing the printed draft of the Gazetteer. I have to compliment for the inspirations with which they completed this job.

I also have to thank the officials of the Archives, Librarian, Library Assistants, who had made the requisitioned Archival sources for reference to the work. Though the draft was prepared on the basis of the information

furnished by the officials, the portions of the completed draft relating to the concerned department were sent to them inviting their remarks and suggestions. The suitable modifications offered by certain departments were carried out in the draft before finalisation. Information in the Gazetteer is furnished with due and diligent care as it is an authentic book on the district. However, suggestions are invited from readers for improvement in the future editions.

Tamil Nadu Archives,
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Dr.K.S.K.Velmani
(Editor - Gazetteers)

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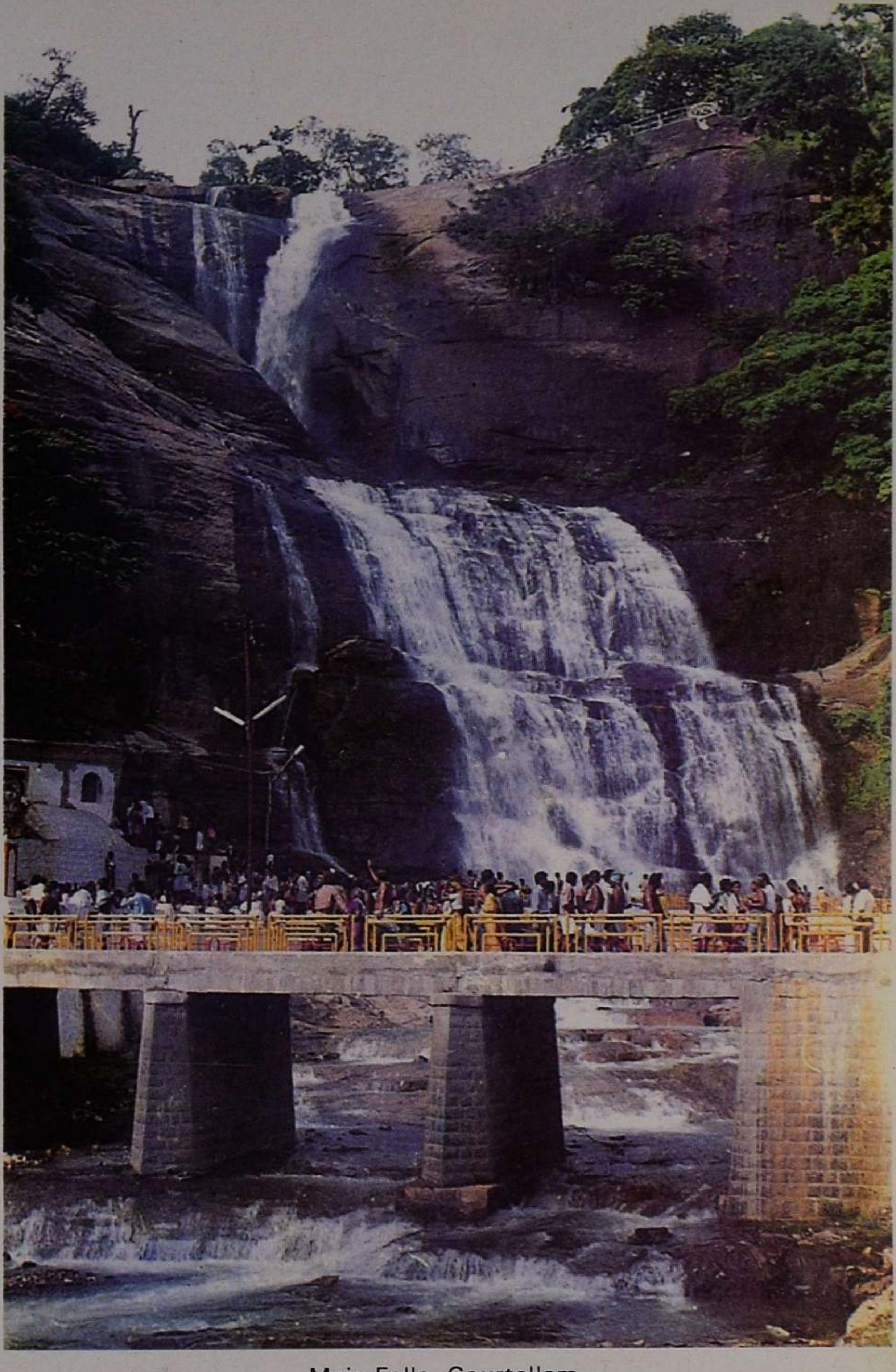

Main Falls, Courtallam

LOCATION MAP TAMILNADU STATE IN

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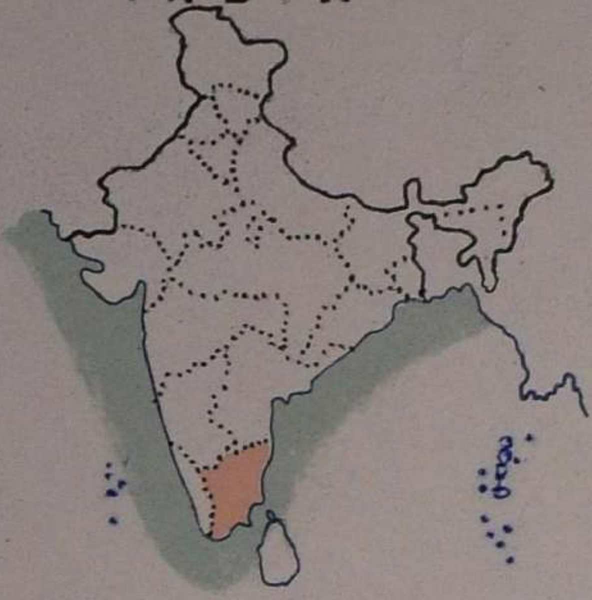

LOCATION OF TIRUNELVELI DISTRICT IN

TAMIL NADU

TIRUNELVELI DISTRICT

Note :-

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The territorial waters of India extend into the sea to a distance of twelve nautical miles measured from the appropriate base line.

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Map Reproduced as per the information furnished by the Indentor.

CHAPTER - 1

GENERAL

Thenpandinadu of the early Pandyas, Mudikonda Cholamandalam of the Imperial Cholas, Tirunelveli Seemai of the Nayaks, *Tinnevelly* district of the East India Company and the British administration and Tirunelveli district of Independent India became Nellai-Kattabomman district on its bifurcation and subsequently was christened as Tirunelveli-Kattabomman district. In July 1997, the Government of Tamilnadu took a decision to call all the districts only after the headquarter towns of the districts. Accordingly, Tirunelveli-Kattabomman district has since become Tirunelveli district. The district is described as a microcosm of the State owing to its mosaic and diverse geographical and physical features such as lofty mountains and low plains, dry *Teri* structures, rivers and cascades, seacoast and thick inland forest, sandy soils and fertile alluvium, a variety of flora, fauna, and protected wild life. It is the penultimate southern most district of Tamil Nadu.

Origin of the Name of the District

A study in the British records shows that the term *district* was initially used not in the present connotation, but to denote an administrative unit either big or small. When the British consolidated their possessions in the Carnatic and demarcated it into viable administrative divisions, the 'districts' came into being. The districts were mostly named after the towns where the headquarters were located. On acquisition from the Nawab of Arcot in 1801, the British named it as *Tinnevelly* district though their headquarters was first located in Palayamkottai the adjacent town, where they had their military headquarters during their operations against the Palayakars of the south on behalf of the Nawab. Two reasons may be attributed for naming it after Tirunelveli. One is because, it was and is the chief town of the district and the other is that it was already called as *Tirunelveli Seemai* under the Nayaks and the Nawabs. Both Tirunelveli and Palayamkottai grew as the twin towns of the district. As was their wont to corrupt the names to suit their linguistic convenience, the British called Tirunelveli as *Tinnevelly*.

Bifurcation

With a view to making the district administration more effective, the Government of Tamil Nadu reorganised some of the larger districts and carved new districts out of them, in stages. Tirunelveli district also

was decided to be bifurcated. An Expert Committee was constituted in 1984 to study and recommend to the Government the details of the bifurcation of the district.[1] On the basis of the recommendations submitted by the Committee in 1986, the district was demarcated into two districts, one with headquarters at Tirunelveli and the other with headquarters at Thoothukkudi, with effect from 20th October 1986.[2] The Government christened the district with headquarters at Thoothukkudi as V.O.Chidambaranar district in memory of the late V.O.Chidambaram Pillai, a veteran freedom fighter hailing from Ottapidaram who ran a Swedeshi Shipping Company as a challenge to the British trade in India and endured so much hardships and torture in jails including pulling of oil crusher. The district with headquarters at Tirunelveli was named as Nellai-Kattabomman district after Veerapandya Kattabomman of Panchalamkurichi, an early martyr to the cause of anti-British struggle who was hanged by the East India Company administration in a public congregation at Kayattar for his act of defiance to the British authority .[3] The Nellai-Kattabomman district was subsequently renamed as Tirunelveli-Kattabomman district, retaining the earlier name as the prefix. In 1997 the district got its old name, Tirunelveli district. Thus, the district came into being.

Antiquity of Tirunelveli

Tirunelveli was not a significant town or for that matter not a town at all during the Sangam Age. The writing of the early Greeks and Sangam poets do not mention the town. Tirunelveli was just a chief town of the Pandyas to the south of their capital.[4] During Nayaks period, it became the capital of their southern province.[5] Since then, it was known as *Tirunelveli-Seemai*.

Puranic Association

The Tirunelveli Sthalapurana prescribes a tradition for the origin of the name Tirunelveli.[6] The puranic version goes that one Vedasarma, a staunch devotee of Siva, on his pilgrimage from the North to the South, was invited by the Lord Siva, in his dream, to His abode on the banks of the sacred river Tamiraparani. In deference, the delighted devotee came to the place, bathed at 'Sindupoondhurai' and worshipped the Lord. He stayed there with his family and did his daily prayer by offering the rice cooked out of the freshly harvested paddy; Once, there was a famine which forced the devotee to collect paddy by way of begging and carried on his routine prayer. One day he spread out the paddy to dry under the Sun before the Lord, and went for his ablutions in Tamiraparani. He prayed to the Lord for rain which he thought could be a remedy for the famine. His prayer was answered and when he was bathing, a thunder storm

broke-out and it rained heavily. Vedasarma rushed to the place where he had spread the paddy. He witnessed a wonderous miracle. Despite rain around the area, the paddy that he spread did not get even a single drop of rain and the paddy did not get soaked. The area spreading the paddy was well under the bright sunlight. Since that day, according to the Purana, the town was called Tirunelveli (திரு + நெல் + வேலி) as the Lord of the town hedged by the paddy for Tirunelveli means 'Sacred hedged paddy'. Though, as said in the Purana, the paddy was hedged by rain, in course of time, it was called as 'Sacred paddy hedge'.[7]

The Sthalapurana says that the earlier name of Tirunelveli was Venuvanam where Lord Siva married His Consort Gowri. Other names of Tirunelveli, according to the Sthalapurana, are Thirumoorthipuram, Ibapuri, Tharanisaram and Sakalasithi. The author of the Puranic work equates Tirunelveli to that of Kancheepuram in sacredness and calls it as Thenkanchi.[8] Other shortened names to refer Tirunelveli are Nellai, Nellaiyampathy and Nellaiyambalam.[9]

Reference in Literature and Inscriptions

As mentioned earlier, there are no references about Tirunelveli in the Sangam literature. In the Devaram hymns, generally ascribed to 7th Century A.D., there are references about Tirunelveli. Following is an example of the Thirugnanasambandar's versification of the presiding deity of the town:-

ஏனவெண் கொம்பொடு மெழில்திகழ்

மத்தமும் இளஅரவும்

கனல்வென் பிறைதவழ் சடையினர்

கொல்புலித் தோலுடையார்

ஆணினல் லைந்துகந் தாடுவர்

பாடுவரருமறைகள்

தேனில்வண் டமர்பொழில் திருநெல்

வேலியுறை செல்வர்தாமே.

There are about 526 historical inscriptions in the district identified

and copied up to the year 1912. Of course, in Tirunelveli town alone, there are about 100 inscriptions. But, none of them has been dated before 11th Century.[10]

Location and Area

The position of the district in the world map is between 08^0 8′ and 09^0 23′ latitudes and $77^0$09′ and $77^0$54′ longitudes.[11] The total geographical area of the district is 6792.08 sq.km.[12] The district constitutes 5.24 per cent of the total area of Tamil Nadu State (130059 sq. km.)

Boundaries

The district has common border with the State of Kerala, Bay of Bengal, (Gulf of Manna) and the districts of Virudhunagar, Thoothukkudi and Kanniyakumari. The lofty Western ghat mountains, in the west and north-west and the Bay of Bengal in the south and the south-east stand as the natural boundaries of the district. The Virudhunagar district bounds the district in the north and the north-east. The district is hemmed in by the Thoothukkudi district in the east and the north-east almost running parallel from the north to the south. Kanniyakumari district bounds Tirunelveli district in the west and south-west. The lengthiest straight line that can be drawn on the area of the district will be connecting the northern most point of the Sivagiri taluk and the southern most point of the Radhapuram taluk.

Population

The Census enumeration of 1991 reveals that the total population of the district is 25,01,832 of whom, 12,29,902 are males and 12,71,930 are females. Of the total population, 17,08,656 dwell in the rural areas and 7,93,176 in the urban areas.[13] The total males and females of rural areas are 836798 and 871858 respectively and the figures for urban areas are 3,93,104 and 4,00,072.

The total population of the district forms 4.48 per cent of the total population of the State of Tamil Nadu (55858946). In terms of population, it is the tenth largest district of the State while the pre-bifurcated South Arcot district (now Villupuram and Vellore districts) was the first and the Nilgiris district was the last. The density of population in the district has been calculated as 367 per sq.km. in 1991 as against 326 per sq.km. in the previous Census (1981).[14]

History of the District as an administrative unit

There are literary references which show that the Sangam Pandyas divided their country into administrative units, known as 'Valanadu, nadu and 'Kurram' in that descending order.[15] When the Pandya country came under the Imperial Cholas, it was known as Rajaraja Valanadu since 991 A.D. It became Rajaraja Mandalam in 1012 AD and was re-christened as Rajaraja Pandinadu since 1022 A.D.[16] The country was subdivided into *Valanadus* and the area now Tirunelveli district comprised the *Mudikonda Cholavalanadu*. The Valanadu was divided into many *nadus* and *Kurrams.* The Nadus and Kurrams as evidenced from the inscriptions of the district are *Kilvembu nadu* (Tirunelveli and Sevalapperi.) *Melvembunadu* (Cheranmadevi and Suttamalli, Thiruvazhuthi *Valanadu* (Karukkurichi), *Mulli nadu*, (Ambasamudram and Kallidaikurichi), *Anma nadu* (Cholapuram), *Vanavan nadu* (Kalakadu), *Thannari nadu* and *Vadavari nadu* (Sankarankoil and Vasudevanallur), and *Arasur* nadu (Kayathar). The *Kurrams*, mentioned are *Tirukkanaper Kurram* and *Milali Kurram*.[17]

But, the exact and accurate jurisdiction and the corresponding present villages comprised of the nadus and Kurrams are difficult to locate.[18] The administrative sub divisions ceased to exist gradually after the rule of the Kulottunga-I.[19]

The advent and exit of foreign powers and the rise and fall of empires caused frequent political changes in the country. Taking advantage of the civil war in the Pandya Kingdom, Malik Kafur invaded and established the Mohammedan rule in Madurai which collapsed along with the Khilji Sultanate at Delhi. It was followed by the rule of the Tughlaks and Jalal-ud-din Hasan, a Governor of Tughlak formed Madurai Sultanate by conquering the southern India. After a precarious existence for nearly half a century it fell to the onslaught of the local powers led by Kumara Kampana, a Vijayanagar ruler.[20] Thus, from the period of the Second Pandya empire to the Vijayanagar regime, there were frequent changes in the administrative divisions and the governing system.

The Palayams

When Viswanatha Nayak, a Vijayangarar General carved out Madurai Nayakdom, he began to establish palayams and left them incharge of the palayakkars. He appointed the local Marava chiefs as the palayakkars for the palayams created in the western stretch of the area now Tirunelveli district and he nominated the Nayaks as the palayakkars of eastern portion of the district. For example, the ancestors of Pulithevar of Nerkattumsevval were the Marava palayakkars and that of Veera Pandya Kattabomman of

Panchalamkurichi were the Nayak palayakkars. The Palayams were the administrative divisions. There were about 22 palayams in the area now under Tirunelveli district.[21] The entire palayams constituted Tirunelveli Seemai of the Nayak administration.

When the country passed from the Madurai Nayaks to the Nawabs of Arcot in 1736, the Palayams continued and the area collectively came to be known as Tirunelveli Province.[22]

The administrators of the Tirunelveli province during Nawab's rule were Anwarkhan (1744), Chulam Hussain (1746), Hussain Mohammed Khan (1749), Alam Khan (1751), Teertarappa Mudali (1752), Mundi Miyan (1753), Maphus Khan (1755), Dalavai Alagappa Mudali (1756), Mohammed Yusuf Khan (1758), Rajah Kormminam (1764), Sheik Mohammed Ali (1770), Syed Mohammad Khan (1771), Mohammad Ediber Khan (1776), Tirumalappa Mudali (1778), Ali Namas Khan (1779) and Dalavai Tirumalappa Mudali (1780).[23]

Towards the close of the year 1781, a treaty was signed between the Nawab of the Carnatic and the East India Company according to which British took over the civil administration of the Carnatic including the modern Tirunelveli district. The Board of Revenue was not then constituted (it was constituted in 1786), and so, for running the civil and revenue administration of the Carnatic, a Committee of Assigned Revenue was appointed. The Committee left the civil and revenue administration of the provinces to the Receivers of the Assigned Revenue (then Superintendents of the Assigned Revenue).

The first Receiver of the Assigned Revenue appointed in the year 1781 to the then Tirunelveli province, virtually the first Collector, was George Proctor who was succeeded by Irwin in 1783.[24] In the year 1788, the East India Company surrendered the civil administration to the Nawab of Arcot who sent one Mohammad Ikbath Khan as the administrator of the province.

Proclamation of 1790

The East India Company Government at Madras, however, took over the general administration of the country by unilateral proclamation of 7 August 1790. They called this action as the '*Assumption of Management of the Nawab's country*'. On 23rd July 1790, even before the date of the proclamation, Collectors had been appointed to various other districts. Benjamin Torin, who had acquaintance with the district as

the Pay Master General of Palayamkottai, was appointed the Collector of the then Tirunelveli and the dependent Palayakars. By the Treaty of 1792, between the Nawab of Arcot and the British, the Collector was redesignated as the 'Collector of the Zamindar and Poligar Peshcush in the *Tinnevelly*, Madurai, Trichinopoly, Ramanathapuram and Sivaganga districts. Ramanathapuram served as the headquarters of the Collector. Torin was succeeded by Landon as the Collector and on his death in 1794, George Powney became the Collector. At the close of the year 1797, Jackson was appointed Collector and he was succeeded by Lushington in 1799. After the final war against the palayakkars was over, the Nawab of Arcot ceded the entire Carnatic to the East India Company by a Treaty signed on 31 July 1801. On the same day, an order was issued by the Nawab to his principal Amildar in Tirunelvelli to transfer all his powers to the Company's representative. Lushington took the charge and became solely responsible to the East India Company alone. He moved his headquarters to Tirunelveli which had been hitherto in Ramanathapuram. A week later he reported to Madras that the province of Tinneveli had been brought under the Company's authority. By 1801, the former Tirunelveli province which had jurisdiction up to Tiruchirappalli was divided into Tiruchirappalli, Madurai and Tirunelveli districts. The land south of Madurai formed *Tinnevelly* district, the then southern most district of the Madras Presidency since the present Kanniyakumari district was then with the State of Travancore.

By 1800

When the British assumed the administration of the district, it was divided in to 19 taluks and 15 palayams that came to be called as zamins and the smaller Zamins as Mittahs. The zamins were Ettayapuram, Melmandai, Attankarai, Kadambur, Maniyachi, Sivagiri, Talaivankottai, Avudaiyapuram, Naduvakurichi, Alagapuri, Uttumalai, Surandai, Chokkampatti, Urkad and Singampatti.[25] The names of the 19 taluks could not be traced but, they were reduced to eleven by reconstitution. The eleven taluks were Nadumandalam, Sankarankoil, Alwartirunagari, Srivaigundam, Panchamahal, Kalakadu, Nellaiyambalam, Vidugramam, Tenkasi, Seramadevi and Brahmadesam. In the year 1838 the taluks were reconstituted by bringing the total number of taluks to 13. On reorganisation, the Nadumandalam taluk was done away with as it was bifurcated into Sattur and Srivilliputhur taluks. Alwartirunagari taluk was rechristened as Ottapidaram. On the abolition of Kalakadu taluk Nanguneri and Valliyoor taluks were established. There were no changes in the re-organisation in respect of Sankarankoil, Srivaikundam, Panchamahal, Nellaiyambalam, Vidugramam, Tenkasi, Seramadevi and Brahmadesam taluks.

Taluk re-constitution in 1860

In the year 1860, the 13 taluks were reduced to nine by territorial redistribution. By the reconstitution, a new taluk, Tenkarai taluk was created by merging the former Srivaikundam and Panchamahal taluks. The Nanguneri and Valliyur taluks were merged and called Nanguneri taluk. By merging the Nellaiyambalam and Vidugramam taluks, Tirunelveli taluk was created. The former taluks of Seramadevi and Brahmadesa.n were put together and named as Ambasamudram taluk. Later, in the year 1893, Tenkarai taluk was renamed as Srivaikundam taluk. The taluks of Sattur, Srivilliputhur, Ottapidaram, Sankarankoil and Tenkasi continued to function without any territorial change.

Changes in 1910-1911

In the year 1910, when Ramanathapuram district was carved out of the composite districts of Madurai and Tirunelveli, the taluks of Sattur and Srivilliputhur were transferred to the newly created district. In the same year, the Ottapidaram taluk came to be known as Koilpatti taluk and the headquarters also was shifted from Ottapidaram to Koilpatti. The Srivaikundam taluk was bifurcated into two, one with headquarters at Tiruchendur and the other with headquarters at Srivaikundam. The Sankarankoil, Nanguneri, Tirunelveli, Tenkasi and Ambasamudram taluks continued to function as before.

By the year 1933, though there were no changes in the total number of taluks (i.e) eight - Ambasamudram, Nanguneri, Tenkasi, *Tinnevelly*, Sankarankoil, Srivaikundam, Tiruchendur and Koilpatti, there were sub-taluks with headquarters at Vilathikulam, Thoothukkudi, Palayamkottai, and Radhapuram.[26] Later, Sivagiri and Sattankulam also became sub-taluks.

Sengottai Taluk

The rulers of Madurai, upto the times of Arcot Nawab, included Sengottai within their domain. During the Nawab's administration the Travancore kings paid tributes to the Nawab of Arcot as the Zamindars of Sengottai. But, when the Tirunelveli province was ceded to the British, Sengottai was retained by the Travancore kings. As the Travancore kings paid tributes to the British, it was allowed to remain within the Travancore State.[27]

In 1956, when the States of India were reorganised as per the recommendations of the Commission for the Reorganization of States an area of 70.2 sq.mile comprising the area in and around Sengottai was transferred to Tamil Nadu State which was added to the pre-bifurcated Tirunelveli district as the ninth taluk called Sengottaii taluk.[28]

Anjengo and Tangaseri

In the year 1927, two sub-taluks of Malabar district, Anjengo and Tangaseri were transferred to the Tirunelveli District.[29] But, in the year 1950, the two sub-taluks along with a portion of Panagudi village were transferred to the then Travancore-Cochin State to form part of the Quilon district.[30]

Later by 1970, the tenth taluk was also created by bifurcating Koilpatti taluk, with headquarters at Ottapidaram. By 1980s, the sub-taluks in the State were upgraded as the full-fledged taluks as a measure to improve the administration which, the Government thought must be helpful to the people. Consequently, four sub-taluks in the erstwhile Tirunelveli district, viz. Sivagiri, Vilathikulam, Thoothukkudi and Sattankulam, were upgraded as full-fledged taluks bringing the total number of taluks in the district to 14.

On the eve of bifurcation of the district, there were 17 taluks, the additions to the previous 14 taluks being Radhapuram, Palayamkottai and Veerakeralanpudhur. The 17 taluks were, Ambasamudram, Koilpatti, Nanguneri, Ottapidaram, Palayamkottai, Radhapuram, Sankarankoil, Sattankulam, Sengottaii, Sivagiri, Srivaikundam, Tenkasi, Tiruchendur, Tirunelveli, Thoothukkudi, Veerakeralanputhur (additional taluk) and Vilathikulam.

When the Tirunelveli district was bifurcated into Tirunelveli-Kattabomman and V.O.Chidambaranar districts with effect from 20 October 1986, ten of the taluks (i.e) Tirunelveli, Palayamkottai, Sankarankoil, Ambasamudram, Nanguneri, Radhapuram, Tenkasi, Veerakeralanpudhur, Sengottaii and Sivagiri together formed Tirunelveli-Kattabomman district. Of the ten taluks, that constitute the district, Veerakeralanpudhur is an additional taluk while the other nine are full-fledged taluks. Administrative steps have been taken to upgrade Veera-Karalanputhur into a full-fledged taluk.

TOPOGRAPHY

Natural Divisions

Eastward from the Western Ghats, the district is a plain land having wide geological diversities. It may be divided into five major natural divisions which are western ghat slopes, river valleys, dry red lands, coastal 'Teri' lands and plains of black soil.

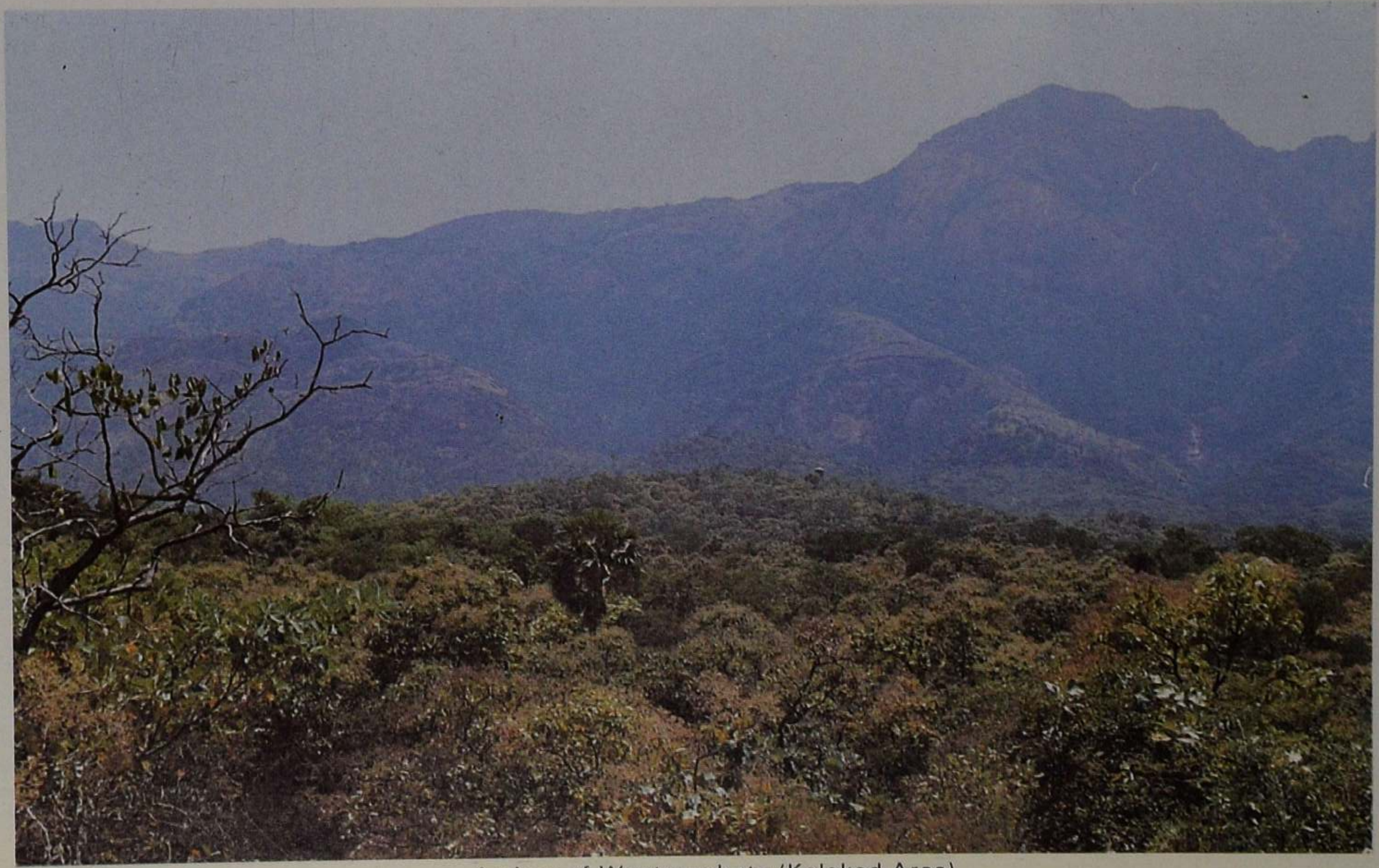
The western portions of the taluks of Sivagiri, Sengottaii, Tenkasi, Ambasamudram and Nanguneri form the slopes of the ghats which are bestowed with natural forests, rivers, rivulets, streams and waterfalls, wild life and irrigated lands. The river valleys are the lands that have skirted the rivers of the district on both the banks being benefited by its water through irrigation. These are the fertile spots of the district. This part includes some patches of the Ambasamudram, Palayamkottai, Tirunelveli and Tenkasi taluks where the chief river of the district and one of the five chief rivers of Tamil Nadu, the Tamiraparani and its tributaries flow.

Dry red lands are scattered in the district. The areas excepting the ayacuts of the rivers and tanks and forests of the district are dry either red or black. Though the district includes in its name *paddy* (நெல்),it is really famous for palmyra trees. This tract of dry red lands is famous for having palmyra groves. A statistics of 1917 show that there were about nine million palmyra trees in the composite Tirunelveli district.[31]

Coastal *Teri* lands is the peculiar geographical division of the district. The area is an undulating sandy coastal plains sloping imperceptibly to the south - south - east (Radhapuram taluk) towards the Gulf of Mannar. The average elevation of the level country is between 15 and 25 m. above M.S.L. Occurrence of red sand dunes known as *teri* and coastal sand dunes and ridges interrupt the level nature of the country. The dunes are studded with Palmyra trees. In some of the depressions among the sand dunes the local rains and the flow of the sub-soil water from the dunes accommodate and create inland lakes called *taruvais* which are striking features of the *Teri* landscape. Paddy and plantains are raised in the beds of these *taruvais* as the water gradually subsides and recedes after the rains.[32]

Cotton cultivation is one of the significant phenomenon and distinguishing features of the district. The black soil tract which is considered the best suitable soil for cotton cultivation spreads over Sankarankoil taluk and its surroundings.

The district as a whole is sloping from the west towards the sea, so that, the rivers which originate in the western ghats flow towards the east.



A view of Westernghats (Kalakad Area)

Hills - Western Ghats

The Western ghats, the height of which ranges from 900 m. to 1800 m. dominate the western boundary of the district, i.e. the western portion of Sivagiri, Sankarankoil, Tenkasi and Ambasamudram taluks. The mountains are well-clothed with dense forest containing magnificent and invaluable trees between elevations of 1000 m. and 2500 m. The ghats though regular without breaks throughout its existence in the district, drops near the border of Tenkasi and Ambasamudram taluks to form the Ariyankavu Pass near Sengottai through which road and rail links have been provided between the district and the neighbouring Kerala State. In the south western corner of the district, i.e. south of Ambasamudram taluk and west of Nanguneri and Radhapuram taluks, the Western ghats slope down forming the Aralvoimozhi pass, the gate-way to the Kanniyakumari district. The hill ranges in the district portray wall like appearance as they have risen with a suddenness from the base giving less scope for slopes.

Along the sky line, the range averages 1500 m. at least twenty peaks running up to and over the height. Conspicuous among them are the Kattakadai Mottai (1700 m.) above Sivagiri, the great dark mass of Kottaimalai (1900 m.) over Puliyangudi and Kuliratti (1760 m.) towering behind Krishnapuram, Panjantangi (1540 m.) above Courtalam. In the Ambasamudram and Tenkasi taluks, the ghats begin to widen out, and above Papanasam the range attains its greatest thickness. Low hills skirt their base and behind these extend higher undulating hills and broad valleys and plateaus leading gradually up to the great range of high ravaged mountains which mark the watershed.

Agasthiarmalai or Pothigaimalai

The crowning glory of the Western ghats in the district is Agasthiarmalai (1540 m.), otherwise known as 'Eka Pothigai' or Periyapothigai to distinguish it from a smaller mountain adjoining it called Aindu-talai-Pothigai or Penta headed pothigai, The early Greek writers refer to this hill as *Bettigo.*[33] It is second only to Kottaimalai in the district in height but it is the most striking peak considered as the highly sacred mountain of the ghats. The Pothigaimalai is frequently referred to in Tamil literature as the distinguishing mountain of the Pandyas who were addressed as the 'Lord of the Pothigai'. 'Pothigai' literally means a place where many things have been concealed. The river Tamiraparani, the life-line and the chief natural resources of the district, originates here.

Thiruvilaiyadal Puranam, a Tamil work which narrates the supposed sportive deeds of Lord Siva, mentions *Pothigai Malai* as the abode of Agasthiyar, the dwarf Tamil sage, believed to have participated in the

First Tamil Sangam and authored *Agasthiam*, an ancient Tamil philological work, which is not available now. It is said in the Purana that Agasthiyar was commissioned by Lord Siva to bring about an equilibrium of the earth which had tilted downwards in the North (Himalayas) consequent on Lord Siva's marriage with His Consort Parvathi at *Kailai* (Himalayas) where thronged the whole of celestial beings. Agasthiyar, obeying the order, came to the South, stayed at Pothigai mạlai and balanced the earth. Another tradition has it that the rishi Agasthiyar having retired from the world after civilising the South took up his abode in its inaccessible recesses. The peak remained inaccessible and it was the Europeans who scaled it and the Travancore Government erected an observatory on the peak.[34] On the aesthetic beauty of Agasthiyarmalai, it was observed in the early decades of this century that, "a perfect cone in shape standing on a low base in a wide gap on the sky like, Agasthiyarmalai whether viewed from Travancore or *Tinnevelly* but, especially when seen from *Tinnevelly* in the glory of a March sun set, is the most striking peak in the whole range of the hills. Often for weeks together it is wreathed in clouds enjoying as it does the full benefit of both monsoons".[35]

Next to Agasthiyarmalai or Pothigaimalai, on the south stands the great *Ainthalai Pothigai*. If viewed from the east in the evening, the five heads or five peaks, along with the peak of neighbouring rugged Nagamalai will form six silhouettes and they remind one of six sentinels guarding the Agasthiarmalai.

With the Ainthalai Pothigai, the range turns as far Nanguneri frontier which marks the points from which the ghats again march southwards. Here they lost thickness and become steeper, retaining an average height of 150 m. Above Thirukkurungudi, they rise up to 180 m. and then drop slightly to Mahendiragiri range, which dips to rise again and ends abruptly in a magnificent scrap of bare precipitous rock. This is the last of the ghats of the district for north of Panagudi, the mountains rise once more to half their height dropping after a few kilometres to the Aralvoimozhi pass in the level country. The Western ghats see the sea from about six km. away, just west of Kanniyakumari.

The hill range from Sivagiri in the north to Panagudi in the south with its river and river valleys, fertile slopes and thick forests containing valuable trees, medicinal shrubs and herbs and rare flora and fauna, wild life sanctuaries in Kalakadu and Mundanthurai - project Tiger and Bird sanctuary at Koonthankulam and coffee estate in Mahendragiri and above all, the water falls in Courtalam, the Spa of the Southern India and Papanasam constitute the Nature's yet another boon to the district.

Agasthiar Peak

Plains, Plateaus, Rocks, Level from the Sea, Natural Drains, Deserts and Coast

Eastward from the foot of the ghats the district as a whole is one great plain, without plateaus, sloping almost imperceptibly towards the sea in the southeast and towards the newly created Thoothukkudi district which ultimately ends in the sea. Courtalam and its surroundings stand 500 feet or more above the sea level and the district in that part, is somewhat undulating. Occasional low hills locally, called *pothais* - some capped with gneissic rocks of the most fantastic formation (many of them may be seen in Ambasamudram taluk) others with rounded quartzite tops, emerge here and there from the plains and form important landmarks. The most sustained of these formation, is, perhaps the quartzite ridge extending almost unbroken from the neighbourhood of Uttumalai (Tenkasi taluk) as far as Talaiyuthu and forming the watershed between the Tamiraparani and Chittar rivers. Other conspicuous out-crops in the plains are Melappattinam horse-shoe out crop, north-east of Palayamkottai, Singikulam rocks in Nanguneri taluk, Kolundumalai in Seranmadevi and Periyarmalai in Sankarankoil taluk. Owing to its slanting from west to east, the district has natural drains to the sea. But, the major part of the undulating plain and dunes (i.e.) *Teri* lands is badly drained and the large depressions between the sand dunes from local drainage basins into which collect all the rain water giving rise to large inland lakes known as *Taruvais*.[36]

There are no desert pockets of the geographical description. But, the coastal belt of Radhapuram taluk is sandy with dunes and *Taruvais*. The belt of land is suitable for certain kind of cultivation such as palmyra, coconut, acacia, casuarina, etc.

The composite Tirunelveli district had a coastline of about 130 km. As a result of bifurcation, the coastal taluks of Thoothukkudi and Tiruchendur go to form Thoothukkudi district and Radhapuram taluk is the lone coastal area of Tirunelveli district. Hence, the district has a coastline of about 40 km. which borders the district in the south east.

RIVERS

The Tamiraparani, a symbol of Tamil culture and civilization and an identity of the far south of India since the Pandyas were referred to as the rulers of the land where the Tamaraparani flowed in the Tamil and Sanskrit literature from the earliest time, is the chief river of the district. Besides the chief river, the entire net work of the rivers in the district include the Peyar, Ullar, Karaiyar, Servalar, Pampar, Manimuthar, Varahanathi, Ramanathi, Jumbanathi, Gadananathi, Kallar, Karunaiyar, Pachaiyar, Chittar, Gundar, Aintharuviar, Hanumanathi, Karuppanathi and Aluthakanniar. The two rivers of the district which are not linked with

the Tamiraparani are the Nambiar and the Hanumanathi of Nanguneri taluk (There are two Hanumanathis in the district).

The Tamiraparani

Spelt differently as *Tampraparani*, *Tamraparni*, *Tamiravaruni*, etc., the river is mentioned as the Porunainathi in Tamil poetic literature. It gets recognition and referred to as a renowned one in Sanskrit literature too which are as old as that of the Puranas and Epics.[37]

The meaning and origin of the name *Tamiraparani* is reasoned out differently. Bishop R.Caldwell, in his book, *A History of Tinnevelly* discussed the various interpretations of the word 'Tamiraparani' at length. According to him, the meaning of the name Tamiraparani in itself is sufficiently clear, but its application in this connection is far from being self-evident. *Tamara* means, red, *parani* means *parana* a tree which has leaves. Tamiraparani might, therefore, mean a tree with red leaves, but, this is a strange derivation for, the name of a river and the ideas naturally suggest itself that some events or legends capable of explaining the name lies beyond. He further discussed the similarity of the name Tamiraparni and of the old name of the present Sri lanka which was called in olden days as *Tambrabane* and tried to find out the political, cultural and anthropological intercourse of the land of the river with that island. He concludes that it seems more natural that Tamraparani, *the tree with the red leaves* should have been first the name of a tree, then of a town, then of a district and then of a river (it being not uncommon in India for villages to adopt their names from remarkable trees).[38]

Some scholars interpret the name *Tamiraparani* as Tamiram (Copper) + Varuni (Stream or river). They ascribe this origin as the bed of the river is of red soil when the water flows on the red soil it gives a copper like appearance. The Greeks of the Ptoleny's time refer to this river as Solen.

Origin

The Tamiraparani originates from the peak of the Periya Pothigai hills of the Western ghats above Papanasam in the Ambasamudram taluk. The great river like the Cauvery but unlike most of the other Indian rivers, is fed by both the monsoons the south west and the north-eastern and seen in full spate twice a year if the monsoons do not fail.

The Tirunelveli Sthalapurana associates the origin of the river with sage Agasthiyar. It dwells that when Agasthiyar was requested by Lord Siva to move to the South, Parvathi Devi, the divine consort of Siva filled the sage's font meant to hold water for poojas (kamantala) with the water from Ganges and on his arrival at Pothigai, he released it and the water ran as Tamiraparani.[39]

Prior to the bifurcation of the Tirunelveli district, the Tamiraparani was the only major river in Tamilnadu which had its source and end in the same district. After bifurcation, the river traverses the two bifurcated districts before joining the Gulf of Mannar of the Bay of Bengal at Punnaikayal in Tiruchendur taluk.

Course and Tributaries of the River

From the source to sea, the total length of the river is about 125 km. of which its course in Tirunelveli district alone is about 75 km. Originating at an altitude of 1725 m. above MSL at Periya Pothigai hill ranges an integral hill tract of Western ghats in Ambasamudram taluk, it passes through the taluks of Tirunelveli and Palayamkottai of Tirunelveli district and Srivaikundam and Tiruchendur taluks of Thoothukkudi district. In the Ghats, the chief tributaries of the river are the Peyar, Ullar, Kariar, Servalar and the Pambar. These rivers join the Tamiraparani and enrich its course before it reaches the plain. The first tributary which enriches the water of the Tamiraparani in the plains on the right side is the Manimuthar. Then comes the Gadananathi, which joins the Tamiraparani at Tiruppudaimaruthur. Before the Gadananathi's entry into the Tamiraparani, it (Gadananadhi) is joined by the rivers Kallar, Karunaiyar and Veeranathi or Varahanathi. Two other rivers, the Ramanathi and the Jumbanathi combine and flow in the name of the Veeranathi or the Varahanathi which joins the river the Gadananathi about 1.5 km. north-east of Kila Ambur. The river Pachaiyar is another tributary which joins the Tamiraparani near Tharuvai village in Palayamkottai taluk. One of the important and affluent tributaries of the Tamiraparani is the Chithar or Chitranathi which arises in the Courtalam hills and receives supply from the rivers Gundar, Hanumanathi and Karuppanathi. The Chithar empties itself into the Tamiraparani in Sivalapperi Village.

The river drains with its tributaries an area of about 4400 sq.km. As most of its extensive catchment areas lay in the Western ghats, the river enjoys the full benefit of both the monsoons which make the river perennial. Since all its tributaries are arising from the Western ghats, the river is prone to heavy floods especially during the North East monsoon period.[40]

Irrigation Channels

The important Irrigation channels branching off from both the banks of the river Tamiraparani are, South Kodaimelalagian channel, North Kodaimelalagian channel, Nathiyunni channel, Kannadian channel, Kadagan channel, Palayam channel, Tirunelveli channel, Marudur Melakkal, Marudur Keelakkal, South Main Channel and North Main channel.

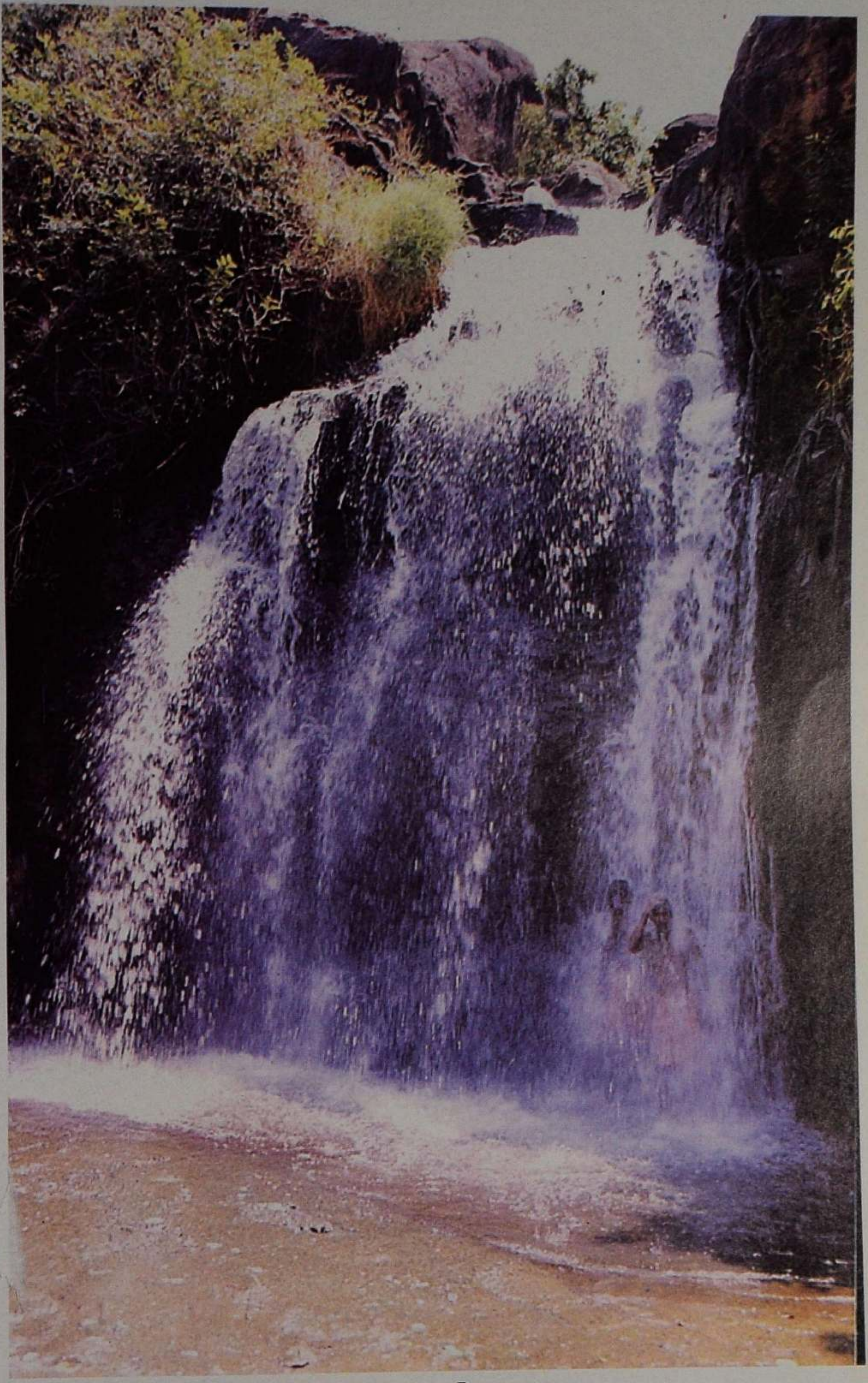
Most of the channels are as old as that of the beginning of the history of Tamil Nadu as the ancient and Medieval rulers dug them for improving the cultivation. The channels in turn feed many tanks which are other sources of irrigation.

Anaicuts (Dams)

Harnessing the river Tamiraparani, there are eight anaicuts or dams built across the river to utilise the water for irrigation in an efficient way. Of the eight, seven had been built by the rulers of Tamil Nadu before the advent of the British and the eighth one at Srivaikundam, the only anaicut across the Tamiraparani in Thoothukkudi district, built by the British Government in the year 1869. The seven anaicuts in the district are, Kodaimelalagian anaicut in Papanasam, Nathiyunni anaicut in Ambasamudram, Kannadian Anaicut just below the confluence of the Tamiraparani and the Manimuthar (Ambasamudram), Ariyanayakipuram anaicut in Ariyanayakipuram, Palavoor anaicut in Palavoor (Tirunelveli taluk), Suthamallian anaicut in Suthamalli (Tirunelveli taluk), and Marudur anaicut in Marudur near Sivalapperi.

Waterfalls and Sacred Bathing Places

There are two waterfalls in the course of the river Tamiraparani. One of them is called Banathirtham or Vanathirtham on the slope of Pothigai hills. For some distance from its origin, the river flows with a rapid current through densely wooded forest till it precipitates itself over a hedge of rocks above 30 m. height. Then by a succession of falls, it reaches Vanathirtham making a magnificent cascade. Another significant waterfall that the river makes is in Papanasam, called Kalyanathirtham. Legends and tradition ascribe the name of Vanathirtham to an *asura* (giant) called Vana and the name of Kalyanathirtham to Goddess Parvathi as she bathed here for the enactment of Her wedding with Siva at Kailai, for the sake of Agasthiya who could not witness the Divine ceremony. A bath in the Kalyanathirtham is believed to destruct all the sins and it is said that the name of the place Papanasam (Papavinasakam - in Sanskrit means, destruction of sins) - is linked to the belief. This Kalyanathirtham is at the place where the Tamiraparani river leaves the mountains and enters the plains. There is another celebrated waterfall not far from Vanathirtham, called Pamban aruvi, the (snake water falls) so called on account of its long snake like appearance when seen from a distance. It consists of two falls, the upper about 150 m. height and the lower about 60 m. height. This remarkable fall is not on the main river but on a tributary which rises on the Ainthalai pothigai (Five-headed-pothigai). People, especially the Hindus, consider the entire river of Tamiraparani sacred and hold it in high veneration. Puranas compare Tamiraparani with that of the Ganges and



Agasthiar Falls, Papanasam

call it as the Southern Ganges. Along the banks of the river, there are many bathing places including *Sinthupoonthurai* by the side of the Nelliappar temple where the images of the God and the Goddess are bathed on festival occasions.[41]

OTHER MAJOR RIVERS IN THE DISTRICT

The Pachaiyar

The river Pachiyar rises on the eastern slope of Western ghats about 11 km. north west of Kalakadu at an altitude of 1000 m. above MSL.[42]It flows eastward up to Padmaneri village from where it changes its course towards north east. It is a tributary of Tamiraparani and makes its confluence with the river in the village Tharuvai. The total length of the river from its source to its confluence with the Tamiraparani is about 32 km. The river Pachaiyar has three tributaries which are Kavayan Odai, Anaikidangu Odai and Uppan Odai. These tributaries join the river Pachaiyar in the villages Arasappattu, Vadagarai and Padmaneri respectively.

There are altogether nine anaicuts and two mud Korambus (dams) built across this river which irrigate an extent of 7536.23 acres of land. The nine anaicuts and the two mud *Korambus* are mud *Korambu* at Arasapathu village, Nadathu anaicut, Palampathu anaicut, Padmaneri anaicut, Sambukulam anaicut, Kattalai-Kaduvetti anaicut, Subbukutti anaicut, Ponnakudi anaicut, mud *Korambai* at Mela Thudiyan village and Thamirakurichi anaicut. From each anaicut, a number of tanks get filled with water for the use of irrigation.

The Korayar

The river Korayar is a tributary to the Tamiraparani. It originates in the eastern slopes of Western ghats, flows in the northern direction and empties into the main river Tamiraparani near Vellanguli village in Ambasamudram taluk after crossing the Kannadian channel through an outlet. This river has no direct 'ayacuts' (irrigation area) but contributes a heavy flood of water to Tamiraparani during rainy season.[43]

The Chittar

The Chittar meaning *little river* or Chitranathi meaning *beautiful river* is a nature's invaluable gift to the district as it is the river which causes a set of splendid cascades in Courtalam and its suburbs, an international cynosure often compared to the famous Spa falls of Belgium for its curative value. It is a major tributary of the river Tamiraparani. The river takes its origin in the eastern slopes of the Western Ghats in the Courtalam hills, called *Tirikoodam* in literature, at an altitude of 1750 m. above MSL. From its origin, the river climbs down for about six km. turns north and

flows for about 16 km. before turning towards the east. Its total length is about 80 km. It joins the river Tamiraparani near Sivalapperi village of Tirunelveli taluk.

The river Chittar has its own tributaries. They are, the Aintharuviar which joins its main river near Gajamajorpuram,the Gundar or Govindar which joins near Tenkasi town the Hanumanathi which mingles with its main river near Veerakeralanpudur village and the Aluthakanniar which meets the main river in Kadapagothi village, all in Tenkasi taluk. The river Chittar makes many patches of,Tenkasi taluk fertile.

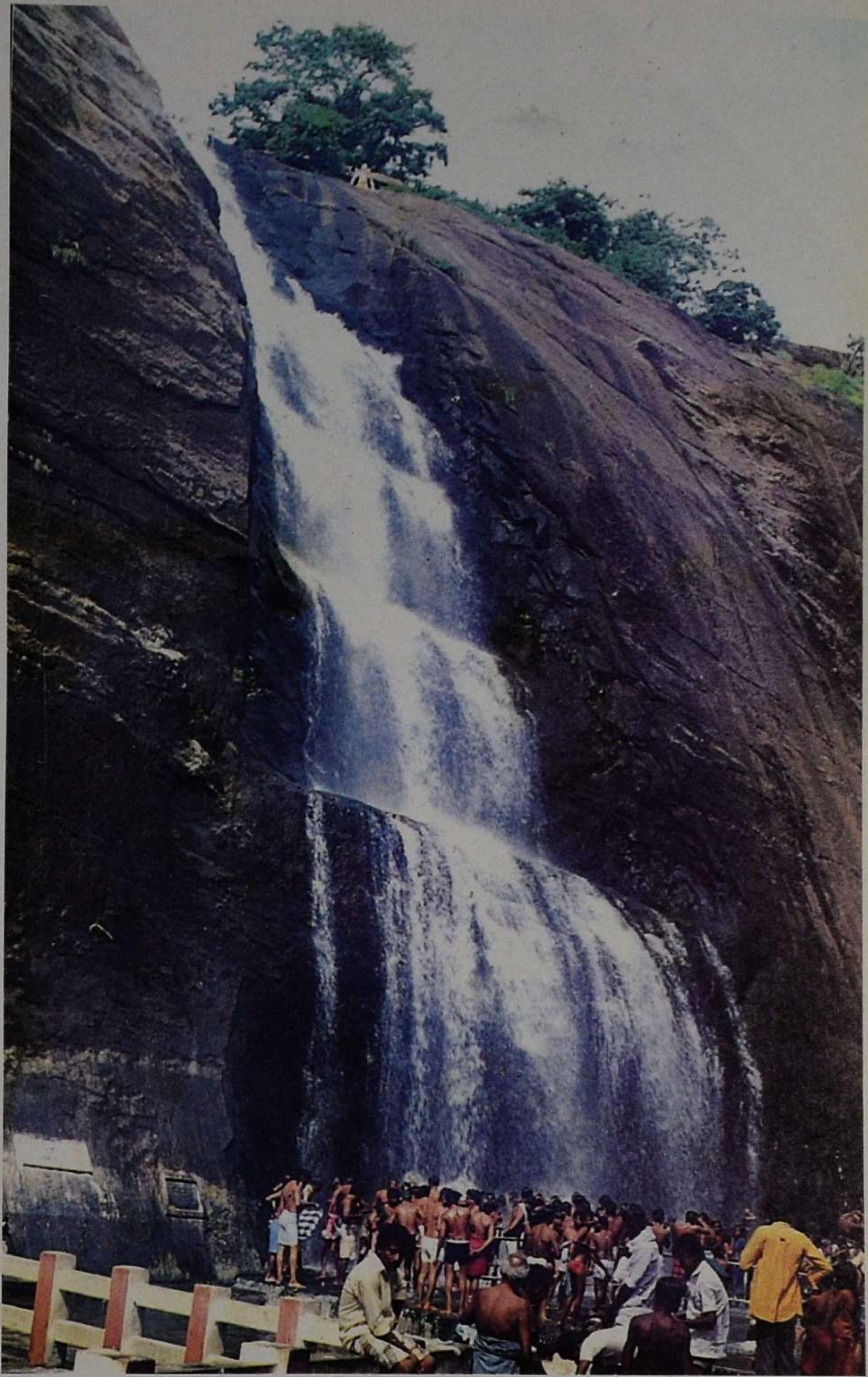
There are 17 anaicuts or dams constructed across this river to harness its course. They are Thalai anaicut, Adivattanparai anaicut, Valvilagadi anaicut, Pulliyoor anaicut, Pavaoor anaicut, Chiruchitrambalam anaicut, Maranathi anaicut, Veeranam anaicut, Manoor anaicut, Mettur anaicut, Ukkirankottai anaicut, Pallikottai anaicut, Azhakiapandiyapuram anaicut, Pillayarkulam anaicut, Shelliannallur anaicut, Piranjanai anaicut and Gàngaikondan anaicut. The anaicuts are the sources of water supply to a number of irrigation tanks.

Waterfalls

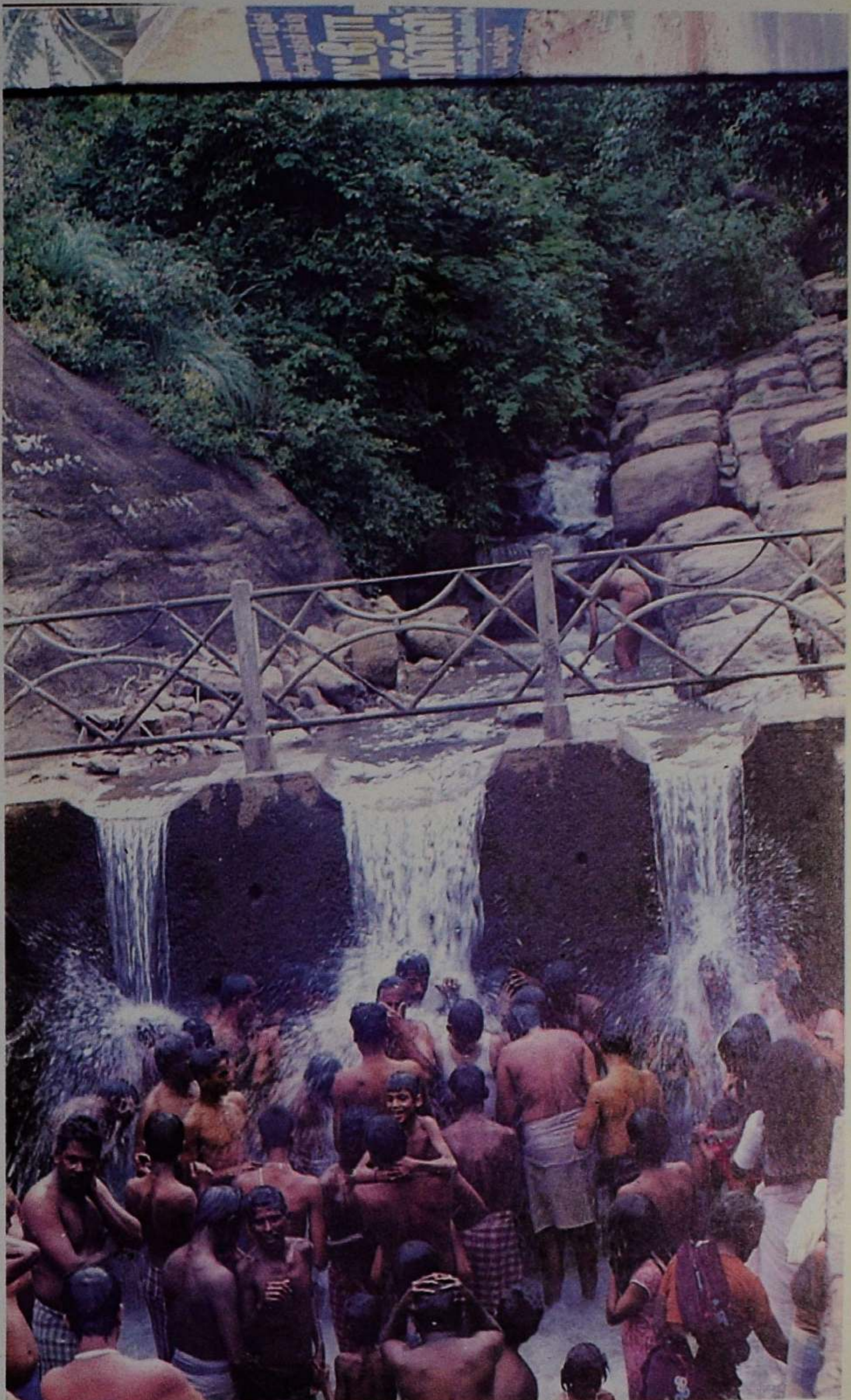
Courtalam is a synonym of waterfalls. The river Chittar and its tributaries during their courses make nine waterfalls in Courtalam. They are called Peraruvi (big falls), Sitraruvi (little falls), Shenbaga-aruvi (Shenbaga - (a flower), Thenaruvi (honey falls), Aintharuvi (penta falls), Puliaruvi (tiger falls), Pudhuaruvi (new falls), Pazhaiya Courtala aruvi (old Courtalam falls), and Pazhathotta aruvi (orchard falls). Of these nine, Dr.Bishop Caldwell refers to only three falls, Thenaruvi, Shenbagadevi aruvi and Vadavaruvi, the upper pool of which is known as *Pongumakadal* (boiling or rising sea).[44] The other six waterfalls might have been insignificant then or might have been formed later and gained importance in due course. Courtalam, though a gifted place, is not mentioned in the Sangam literature perhaps owing to its inaccessibility then. The river Chittar with its waterfalls boosts the economy, tourism, agriculture and trade of Tenkasi taluk of the district.

The Aluthakanniar

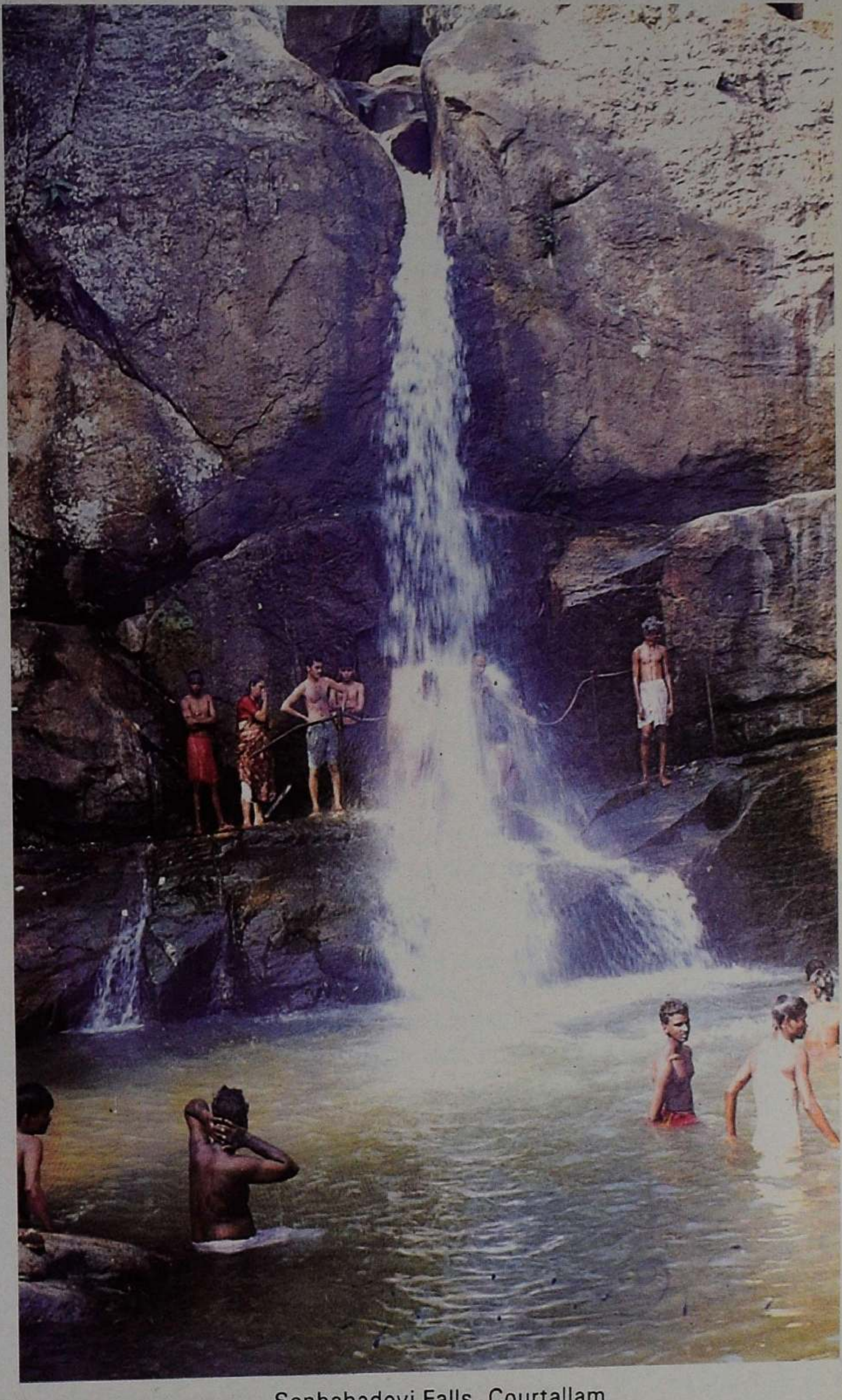
It is a major tributary to the Chittar river. Arising in the eastern slopes of the western Ghats, it flows 10 km. towards north east before joining its main river (Chithar) near Kadapagothi village of Tenkasi taluk. The eight anaicuts that are built across this river are named as Thalai anaicut, anaicuts II, III, IV, Kandamangalam anaicut and anaicuts, VI, VII and VIII.



Old Courtallam Falls



Puliaruvi



Senbahadevi Falls, Courtallam

The Aintharuviar

The Aintharuviar is one of the tributaries of the river Chittar. It takes its origin from the eastern slopes of Western ghats and Joins the Chittar river near Gajamajorpuram village. The river in its course causes a waterfall, popularly known as *Aintharuvi*. There are two anaicuts across the river and they are Aintharuvi anaicut and Ilanaji anaicut.

The Jambunathi

It is a tributary of the Ramanathi. Like all the rivers of the district, it also originates from the eastern slopes of the Western ghats. The river confluences with the Ramanathi near Mokkadagam village. The only anaicut built across this river is Subramaniyathevar anaicut.

The Ramanathi

Originating in the eastern slopes of Western ghats at an altitude of 1720 m. above MSL in the north western corner of Ambasamudram taluk, the Ramanathi flows down the hills for about six km. in the thickly wooded forest and reaches the plain in Melakadayam village from where it runs about eight km. and receives its tributary Jambunathi. The course of the Ramanathi after its merger with the Jambunathi is known as the Veeranathi or Varahanathi. This river joins the Gadananathi near the village Kila Ambur. The Ramanathi finally empties into the river Tamiraparani near Thiruppudaimaruthur. The Ramanathi,the Jumbunathi and the Gadananathi are both direct and indirect tributaries of the prime river of the district. Ramanathi branches off into two,the Ramanathi Vadakal and the Ramanathi 'thenkal' and rejoins at the juncture of its confluence with the Jambunathi. The division of the river takes place from the dam 'Thalai anai'. The two branches of the river have totally eight reservoirs. The northern branch has three anaicuts, viz., Kallakal anaicut, Suchimadayar anaicut and Savalakaran anaicut. The southern branch has five anaicuts (i.e.) Mannanai (Sand dam), Ottai anaicut, Alkolli anaicut, Pottalpudhur anaicut and Adachani anaicut.[45]

The Gadananathi

The Gadananathi or Karunaiyar, like the other rivers of the district, has its origin in the eastern slopes of Western ghats at an altitude of about 1700 m. in Ambasamudram taluk. It is a major tributary of the Tamiraparani.

The river after flowing about 8 km., receives the Pampar and on its course, two other rivulets, Kallar and Iluppaiyar, all these tributaries, join it at Sivasailam village. After the confluence, the river flows about 10

km. and merges with the Ramanathi in Kila Ambur village. There are six anaicuts across the Gadananathi (i.e.) Arasapattu anaicut, Alwarkurichi Thenkal anaicut, Manjapalli anaicut, Kakkavallur anaicut and Kangeyan anaicut.

The Hanumanathi

It is a tributary of the Chittar river. It rises at an altitude of 1650 m. above Courtalam in Tenkasi taluk, traverses in the slopes about 10 km. receives Karuppanathi, its tributary, then it flows and merges with Chittar near Surandai village. There are nine anaicuts built across the river before it joins Karuppanathi. They are Mettukal anaicut, Karisalkulam anaicut, Ponpali anaicut,Vallalkulam anaicut, Elathoor anaicut, Nainaragavan anaicut, Pungamkal anaicut and Kambli anaicut etc.

The Karuppanathi

Arising adjacent to the Hanumanathi to the north of it at the same altitude, it constitutes the major tributary of the river Hanumanathi. The Karuppanathi flows in the slopes for about 9 km. reaches the plains in the village Visavankulam where Vembunathi, a rivulet, contributes its waters to the Karuppanathi as a tributary. Then it runs for 18 km. and joins the Hanumanathi below Urmelalagian anaicut built across the river Karuppanathi. From its source to its merger with the Hanumanathi, there are six anaicuts constructed over the river. They are Thalai anaicut, Pappalkal anaicut, Srivalankal anaicutl, Open Head - Klangad Vadakkukal anaicut and lastly Urmelalagian anaicut.

The Gundar

The river Gundar originates at Mundankoil mottai above Courtalam. The rivulet Mottaiyar and few streams contribute to its water and it flows in Sengottai and Tenkasi taluks for 20 km. and combines with the Hariharanathi. The combined river runs for about 8 km. and joins its main river the Chithar.[46] Three masonry and three temporary anaicuts have been raised across the river. They are Nelloorkal anaicut, Thottachi anaicut and Piranoor anaicut and Maravankal, Sambodaikal and Varahamadankal respectively.

The Mottaiyar

It is a tributary of the Gundar at its head and an anaicut called Mottai anaicut has been built acorss the river.

The Manimuthar

The river Manimuthar is a major tributary of the Tamiraparani. It arises from the dense forest atop Senkutheri in Ambasamudram taluk at

the height of about 1300 m. from M.S.L. The tributaries of the Manimuthar are the Keezha Manimuthar (lower or eastern Manimuthar) and the Varattar. The river runs from its source for a distance of 9 km. and confluences with the Tamiraparani near Kallidaikurichi. In its 9 km. course, it makes minor cataracts. The river contributes a lot, as tributary, to enhance the water level of Tamiraparani as it is always in full spate and perennial. In the year 1957, an anaicut Manimuthar anaicut was built across the river just three km. above its confluence with Tamiraparani.[47]

The Nambiyar

The Nambiyar river is the water source to the Nanguneri taluk. It takes its origin in the western slopes of the Western ghats - 8 km. west of Thirukurungudi village at an altitude of 1500 m. above M.S.L. It runs eastwards and turns south east where it is crossed over by the Tirunelveli and Nagercoil trunk road and confluences in the Gulf of Mannar in the village of Tiruvambalapuram in Nanguneri taluk. Its course of 45 km. is restricted entirely to Nanguneri taluk. The river has two tributaries, the Parattaiyar and the Thamaraiyar. The first tributary is a stream from Mahendragiri hills and the second tributary originates from the combination of two hill streams, the Mombaiyar stream and the Kodumudiyar. These tributaries join the river Nambiyar at the foot of the Mahendragiri hills. The river has been harnessed by building nine anaicuts, Mailaimani anaicut, Dhalavaipuram anaicut, Rajakkamangalam anaicut, Mylapuram anaicut, Kannanathur anaicut, Vijayan anaicut, Kovankulam anaicut, Thittikulam anaicut, and Pulimangulam anaicut.[48]

The Hanumanathi

There are two rivers in the name of Hanumanathi, one flowing in Tenkasi taluk which has been already dealt with and the other in Nanguneri taluk. The latter has its spring head in the Mahendragiri hills of the Western ghats at a height of about 1400 m. from the M.S.L After flowing in the hills to a distance of five km. it touches the plains six km. west of Panagudi village in Nanguneri taluk. The river traverses in Nanguneri taluk for a distance of 30 km. and confluences with the Gulf of Mannar in the Bay of Bengal in the coast of Chettikulam village. Sivampillai anaicut, Senthil Kathayankal anaicut, Thandayalkulam anaicut, Senjothi anaicut, Perungudi anaicut, Vadakkankulam anaicut, Adankarkulan anaicut, Sakkilian Parai anaicut and Kanjaneri anaicut are the nine anaicuts raised across this river.[49]

The Karunaiyar

The surplus waters of Vijayanarayanan tank in Nanguneri taluk together with the local drains flow as Karunaiyar or Karuvenniraiyar. This river runs for a distance of 30 km. and meets the sea near Manappadu in Tiruchendur taluk of Thoothukkudi district.[50]

The Vadamalaiyaru

Two rivulets, Virisidai-idiyaru and Kadaiyamadaiyaru in the eastern slopes of the Western ghats above Sankarankoil taluk, combine and flow as Valamalaiyaru which runs in the taluk and empties into the big tank of Malaiyadikurichi.

The Kottamalaiyaru

This river also originates at an altitude of 1700 m. above M.S.L. in the Western ghats above Sankarankoil taluk. It merges with the small tank of Durgapuram.[51]

The Kombaiyaru

This river springs forth from the Western ghats in Sankarankoil taluk over a height of 1700 m. It is a tributary of Deviyar, the major portion of which benefits the Srivilliputhur taluk of Virudhunagar district. It merges with Deviyar near Vadugappatti village.[52]

The Rajasingiyaru

Three rivulets, the Kallimalaiyaru, the Pazhaiyaru and the Thattapparaiyaru, flowing in the Western ghats in Sankarankoil taluk at an altitude of 1650 m. unite into one river and flows as Pazhaiyaru. This river flowing after some distance takes the name Rajasingiyaru. Further, it divides into two branches, one retaining the name, Rajasingiyaru and the other bearing the name, Ullaru. The two branches then merge with the Deviyaru and before the merger a stream branches off from the Pazhaiyaru and joins the Nichamba river after running in the name of Pazhaiyaru. There are four anaicuts across the Rajasingiyaru.[53]

The Mundhal Odai

This stream originates in Chokkampatti reserve forests (Tenkasi taluk) and runs in the plains in two branches.

Tanks

In Tirunelveli District, there are 420 big tanks and 1779 small tanks. The taluks which have more tanks are Tenkasi (114) and Tirunelveli (104). These water sources are used for irrigation. Besides rain water, the tanks are fed by the reservoirs of the rivers of the district by means of channels. The statistics of the major and minor tanks in the taluks respectively are 104 and 159 in Tirunelveli, 30 and 120 in Srivaikundam, 40 and 639 in Nanguneri, 89 and 337 in Ambasamudram, 114 and 92 in Tenkasi, seven and 187 in Sengottah and 38 and 298 in Sankarankoil.[54]

Water Management

Rivers and major tanks are maintained by the Public Works Department of the Government of Tamil Nadu. The rivers and tanks, in the district level, are under the control of the Superintending Engineer of the Public Works Department with headquarters at Palayamkottai. The area has been divided Basinwise, (i.e.) Tamiraparani Basin Division and Chittar Basin Division. The Executive Engineer, Water Resources Organisation (PWD) Tamiraparani Basin has his headquarters at Tirunelveli and the Executive Engineer Water Resources Organisation (PWD), Chittar Division has his headquarters at Tenkasi. The Executive Engineers are assisted by a number of Assistant Executive Engineers, Assistant Engineers, Junior Engineers, Draughtsmen and other technical officials.[55]

GROUND WATER RESOURCES

Tamil Nadu is one of the pioneer States in the country in developing groundwater resources to meet the various water requirements. Most of the available surface water resources in this State have been fully harnessed and the State has mainly to depend on groundwater for meeting the balance water supply requirements. Due to the increased utilisation of groundwater, certain problems including the depletion of water table beyond replenishable limits in certain districts, and sea water intrusion in the coastal regions have cropped up in certain parts of the State.

Since groundwater is a dynamic resource, continuous monitoring and assessment is essential to avoid haphazard development. systematic and scientific groundwater investigation in Tirunelveli district began in 1970.[56] The Groundwater wing of the Public Works Department undertook detailed groundwater surveys in Tirunelveli district. These include geological mapping, micro level villagewise hydrogeological studies, geophysical survey, water quality analysis, remote sensing studies with the help of aerial photographs and satellite imageries, exploratory drilling operations, conducting pump tests etc. By carrying out the above studies lot of geological, hydro geological and geophysical data have been generated and additional data are also being collected periodically. These data help to assess the groundwater potential in Tirunelveli district.

Most parts of Tirunelveli district are underlain by unclassified crystalline rocks of both igneous and matamorphic types of Archaean age. Only in the coastal region, the formation is sedimentary in nature.

General Hydrogeological conditions

The occurrence of groundwater in the crystalline formation, which occupies major parts of the district is sporadic. The groundwater occurrence

in hard rocks is limited to the top weathered and jointed zones whose thickness may vary from place to place due to heterogenity in characteristics. Generally, in hard rocks, the groundwater occurs in water-table conditions. In the western part of the district, particularly in Vasudevanallur and Tenkasi Blocks (Panchayat Union areas) near the foot hills and also adjacent to Tamiraparani river course, alluvial formations are encountered. Based on the exploratory boreholes drilled and pump tests conducted in these alluvial tracts it is inferred that groundwater potential is high in these areas. Generally, sedimentary formations are suitable for large scale development of groundwater.

Estimation of Groundwater potential and present level of groundwater development

The latest assessment of groundwater potential was done in this district in January, 1992 following with the methodology recommended by Groundwater Estimation Committee of the Government of India. Out of the total available annual average groundwater recharge, 15 per cent is kept reserved for drinking water supply and industrial uses. The balance 85 per cent is taken as utilisable groundwater recharge for irrigation purposes. The annual average groundwater recharge in the district is worked out to be 1183.69 MCM of which utilisable recharge is 1006.13 MCM. The net draft of groundwater per year is 543.50 MCM and the number of wells permissible for drafting groundwater without affecting the recharge potential is 25059.

Present level of Ground water Development

The blockwise estimation of groundwater resources in this district has revealed that Alangulam and Melaneelithanallur blocks fall under dark category where the level of groundwater development is more than 85 percent of utilisable groundwater recharge. Four blocks namely Kuruvikulam, Kilapavur, Radhapuram and Sankarankoil are categorised as grey area blocks where the level of groundwater development varies between 65 per cent and 85 per cent and in the rest of the 13 blocks, the level of extraction is less than 65 per cent and these blocks are categorised as white.

The Groundwater wing of the Public Works Department keeps a watch on the groundwater potential of the district. It has undertaken many researches and studies and adopted various measures for effective utilisation and conservation of the groundwater of the district.

Monitoring ground water level Fluctuations

Continuous monitoring of water levels is very essential in order to assess the gravity of the situation during adverse seasonal conditions like

droughts. For this purpose, about 90 shallow wells spread over the entire district are under observation during the first week of every month. Hydrographs are drawn and the change in groundwater storage is assessed. Automatic Water Level Recorders have been installed in four borewells for continuous monitor.

Geological and geophysical surveys

To know the sub-surface characteristics of the formations, especially the depth of weathering and joined zones in hard rock areas, geological and geophysical surveys are done villagewise. In sedimentary rock regions, the survey is conducted to locate the aquifer disposition and to differentiate good quality and poor quality zones. Besides, they also help demarcate fresh water/salt water interface along coastal belt.

Based on the geological and geophysical studies carried out and interpretations made from aerial photographs and satellite imageries, favourable locations are selected for exploratory drilling. Borewells are drilled to study the lithological characteristics of the formations and pump tests are conducted to assess the yield and also to find out the hydrogeological parameters. Many of the successful boreholes drilled for investigation purposes have been handed over, to the user agencies, such as panchayat unions, Tamil Nadu Water And Drainage Board and other Government departments, to execute drinking water supply schemes.

Water samples are collected from the shallow observation wells, borewells etc., and are tested for their suitability for domestic agriculture and industrial purposes. Based on the results obtained, water quality maps are prepared and problematic areas delineated.

Remote Sensing and Micro Level Study

Using aerial photographs and satellite imageries, land use classification maps, geomorphological maps and lineament maps are prepared.Based on these maps relatively favourable groundwater potential areas are identified, and confirmed by field checks. Thus the groundwater potential pockets are identified and drinking water problems solved especially in critical areas in the hard rock regions.

Micro level intensive villagewise groundwater investigations have been carried out in the entire Tirunelveli district, and assessment is made in individual sub-basin and the balance groundwater potential available, to the villages located within the sub-basin. Based on this study, Minor Irrigation Schemes, are executed.

Through the Ground water Extensive Services scheme, villagers are contacted and informed about the areas where groundwater potential

is available and suggestions regarding the type of wells, depths to be drilled, possibilities of obtaining institutional finance, etc., are given. This is to help the agriculturists in avoiding infructuous expenditure in the construction of wells.

A statement showing the blockwise groundwater potential in Tirunelveli district (as in January, 1992) is furnished in *Appendix-1.*

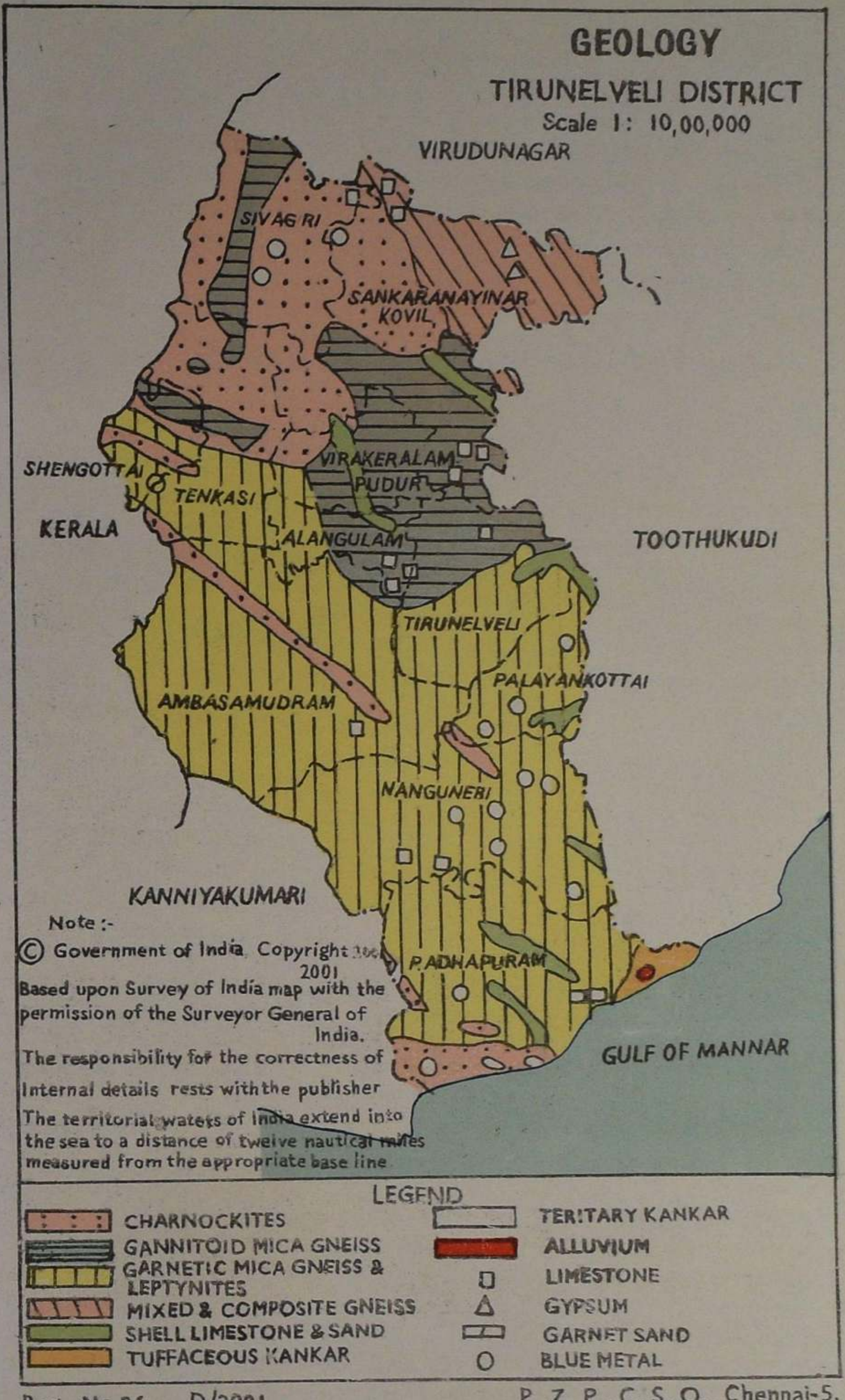
GEOLOGY

Crystalline rocks of Archaen age, Post-Mio Pliocene rock Quaternary rocks and alluvium dominate the geological structure of the district. The crystalline rocks are grouped into Khondalite group, Charnockite group, Mignatite complex and acid intrusives. The Khondalite group is represented by garnetiferous biotite graphite gneiss, Sillimanite, quartzite, Calc gneise, Calc granulite and crystalline limestone. Carnet Sillimenite graphite gneiss is exposed in Singampatti hills from northwest of Singampatti to the south west of Sathankulam. It exhibits good foliation and parellel banding with alternating layers of mafic and felsic minerals. Rose garnet is distributed throughout the district. Quartzite occurs as thin and linear parellel bands of varying dimensions traversing the gneissic country.

Bands of crystalline - limestone and Calegranulite varying in thickness from 15 m. to 180 m. and extending from 100 m. to about 9 km. are found in the area. The important occurrences are seen near Ramayanpatti, Talaiyuthu, Padmaneri, Singikulam, Marandai, Pattamadai and Ambasamudram. They vary from thick massive and coarse grained pure limestone, through medium to fine grained varieties, saccharoidal marbles, impure micaceous limestones, calc granulites and calc gneisses devoid of free calcite.

The Charnockite occurs mostly as concordent bands and lenses of varied dimensions in association with the garnetiferous graphite Sillimanatite gneiss. Narrow bands and small lenses of fine to medium grained dark - coloured pyroxene - granulite occur at a few places within the granetiferous graphite - Sillimanite gneiss and in its mignatitic equivalent garnetiferous biotite gneiss. The Khondalite and charnakite group of rocks are migmatised to gneissic rocks comprising garnetiferous biotite gneiss and hornblonde biotite gneiss. Pink granite and granite gneiss occur as lenses and bands within the charnockitic and gneissic complete. Pegnatite and quartz veins are also sparsely distributed.

The tertiary formation is represented by sandstone and shell limestone and termed as 'Panamparai sandstone' is exposed as detached patches around Kudankulam and Idinthakarai overlying the Charnockite and Khandalite group of rocks. The dominant and conspicous fossils is balanus with a few fossil fragments of ostrea, poeton, etc.



Reg. No.26 D/2001 P. Z. P., C. S. O., Chennai-5.

Map Reproduced as per the information furnished by the Indentor

The quaternaries are represented by Kankar and Tuffaceous limestone and red coloured *Teri* sands. The outcrops are found near the coast along the stream course and tasks where there is stagnation of water during the rainy months. Alluvium varying in thickness from a few metres to as much as 150 m. are found in the river banks and these are pale reddish sands with less proportion of silt.

The stratigraphic succession as worked by the Geological Survey of India, is as follows:-[57]

Alluvium Kankar and Tuffaceam limestone Calcareous sandstone	Quatermary
(Panamparai) and Fossiliferous limestone	Cuddalore Mis-Pliocene
Pegmatite and quartz Vein Granite	Acid Intrusive
Carnetiferous quartzefels-pathic gneiss and granulite Hornblends biotite gneiss.	Migmatite Complex
Pyrexene Gramulite Charnockite	Charnockitic Group
Calc geniss, Calc granulite Crystalline limestone	Archaen
Garnetiferous biotite gneiss and granulises Sillimanite and graphite	Khondalite Group

MINERAL RESOURCES

Limestone

It is one of the major industrial minerals occurring at several places in the district. The major part of the limestones for cement industry in the district come from the crystalling limestone deposit occurring near Ramayyanpatti, Talayuthu and Padaneri. A total reserve of 4.06 million tonnes limestone up to a depth of 15.2 m. in Ramayyanpatti band and 5.08 million tonnes up to a depth of 15.25 m. in Talayuthu band has been estimated. The limestone available here contain calcium Oxide (Ca O) from 34.97 to 55.49 per cent, Magnesium Oxide (Mg O) from 0.31 to 7.24 per cent.

Limestone with calc granulite occurs near Padmaneri and Singikulam. The Padmaneri band consists of six limestone lenses with an aggregate strike length of about 800 m. The average width is 4.75 m. and 0.199 million tonnes of cement grade limestone is estimated from this band. The Singikulam bands which extends over a strike length of 17 km. contains seven limestone lenses with an aggregate strike length of about 6.4 km. and average width of 13 m.About 3.160 million tonnes of cement grade limestone is estimated from this band.

Six bands of good quality limestone occur near Pandapuli and 4,34,000 tonnes of limestone suitable for the manufacture of cement and chemical industries have been estimated.

Other occurrences of crystalline limestone bands have been recorded near Kalappaipatti and Puduppatti. They contain about 0.2 million tonnes up to a depth of 6.0 m. Limestone with Calcium Oxide (Ca O) content of 32 per cent to 45 per cent occurs 3.2 km. south - south east of Kayattar with an estimated reserve of 4.5 million tonnes.[58]

Graphite

In the vicinity of Kurinjakulam, north east of Sankarankoil. rich bands of graphitic gneisses, charnockites and quartzites. One band of graphite gneiss 2.4 to 3.0 m. thick extending for 0.4 km. and three minor bands are traced in this area. The graphite occurs as thin flakes (2.5 cm. in size) uniformly disseminated in between grains of quarts and Kankary matter. The estimated deposits of graphite in this region up to 6 m. depth is 19,000 tonnes.

Graphite flakes in garnetiferous biotite gneiss measuring 1 to 2.5 cm. across are seen in Govindaperi East Sadayamangalam, Kizhkaduvetti Minavankulam and Sivaramamangalam.

Sulphides

Light traces of sulphides occur in and around Pattankadu and Munradaippu. This mineral is of no economic importance.

Ilmenite - Garnet Sands

Occurrence of red garnet sands in the beds of the river Nambiar and Uvari has been recorded. The proportion of garnet is 75 per cent in the rich deposits and 45 per cent in the surface sands. Local concentration of Ilmenite sands are noticed near Vijayapatti and Kuttankuli.[59]

Vermiculite

Vermiculite occurs in the form of pegnatite associated with biotite and apatite near Nettur. The pegmatite is 2.75 m. thick and is zoned with

a central care of 0.64 m. thick consisting of large Crystals of apatite and flanked on either side by biotite and Vermiculite. Some of the blocks are as large as 80 cm. across.[60]

FOREST AND FLORA

Forests

Tirunelveli district has 5.53 per cent of the total forest coverage of the State of Tamil Nadu.[61] The total area of the forest of the district is 1,21,953 ha. of which 81700 ha. is set apart for Tiger reserve of Mundanthurai and Kalakadu. The entire forest of the district stretches along the Western ghats from Sivagiri in the north to Mahendragiri in the south.

Various types of forests from luxuriant tropical wet evergreen forests to southern thorn scrub forests occur in the district. Owing to its diverse geographical factors.[62] The forests in the district is technically classified into eight types which are, Southern hill top tropical evergreen forests, West Coast tropical evergreen forests, Southern moist mixed deciduous forests, Ochlandra reed forests, Carnatic umbrella thorn forests Southern Euphorsia scrub and Southern thorn scrub.[63] Area-wise, the forests in the district may be grouped into 1. Valliyoor Reserve Forests 2. Kalakad, Mundanthurai and Courtalam reserve forests 3. Singampatti (Ex-Zamin) forests 4. Kazhukumalai, Manopathi and South Veeravanallur reserve forests 5. Kurumalai, Chilikulam, Sivalaperi, Muthur and Gangaikondan Reserve forests 6. Kaliyanoor reserve forests and 7. Kudiraimozhi Teri Reserve forests.[64]

Valliyoor Reserve Forests

The reserve forests in Valliyoor is of southern tropical thorn forests type. Its extent is 290.57 ha, spread over the eastern slopes of the Western Ghats in the Valliyoor taluk. The forest area is within the administrative jurisdiction of the Nanguneri Forest Range.

Kalakadu Mundanthurai, Courtalam and Singampatti Reserve Forests

These forests occupy a vast extent covering the eastern slopes of the Western ghats. The important types of forests found in the group of reserve are West Coast Tropical Evergreen Forest, Tirunelveli Semi evergreen Forest, Southern Moist Mixed Deciduous Forests, Dry Teak Forest, Southern Dry Mixed Deciduous Forest and Ochlendra Reed Brakes.

Singampatti Forests

The Forests of the Singampatti and its suburbs is in between river Manimuthar and Kalakad forests. The entire forest consist of the types of

West Coast Tropical Ever green Forest, Tirunelveli Semi Evergreen Forest, Southern Moist Mixed Deciduous Forest and Southern Dry Mixed Deciduous Forests.

Kolundumalai, Manopathi and South Veeravanallur reserve forests belong to the Carnatic Umbrella thorn type. Chalikulam, Sivalaperi, Muthar and Gangaikondan reserve forests come under the category of Southern Thorn Scrub. Kaliyavoor reserve forests is classified as the Carnatic Umbrella Thorn Forest.

Kudiraimozhi Teri Forests

This is a very open and irregular formation of stunted trees and bushes. Though Champion and Seth could not prescribe any suitable classification to this type of forests, the forest working plan (1976-77 - 1985-86) of the district categorises this type as Desert dune scrub.[65]

A list of the Reserve Forests in the district notified by the Government is appended in *Appendix-2.*

FLORA

Tirunelveli District can be divided naturally into three distinct regions, namely:-

(1) Coastal region,

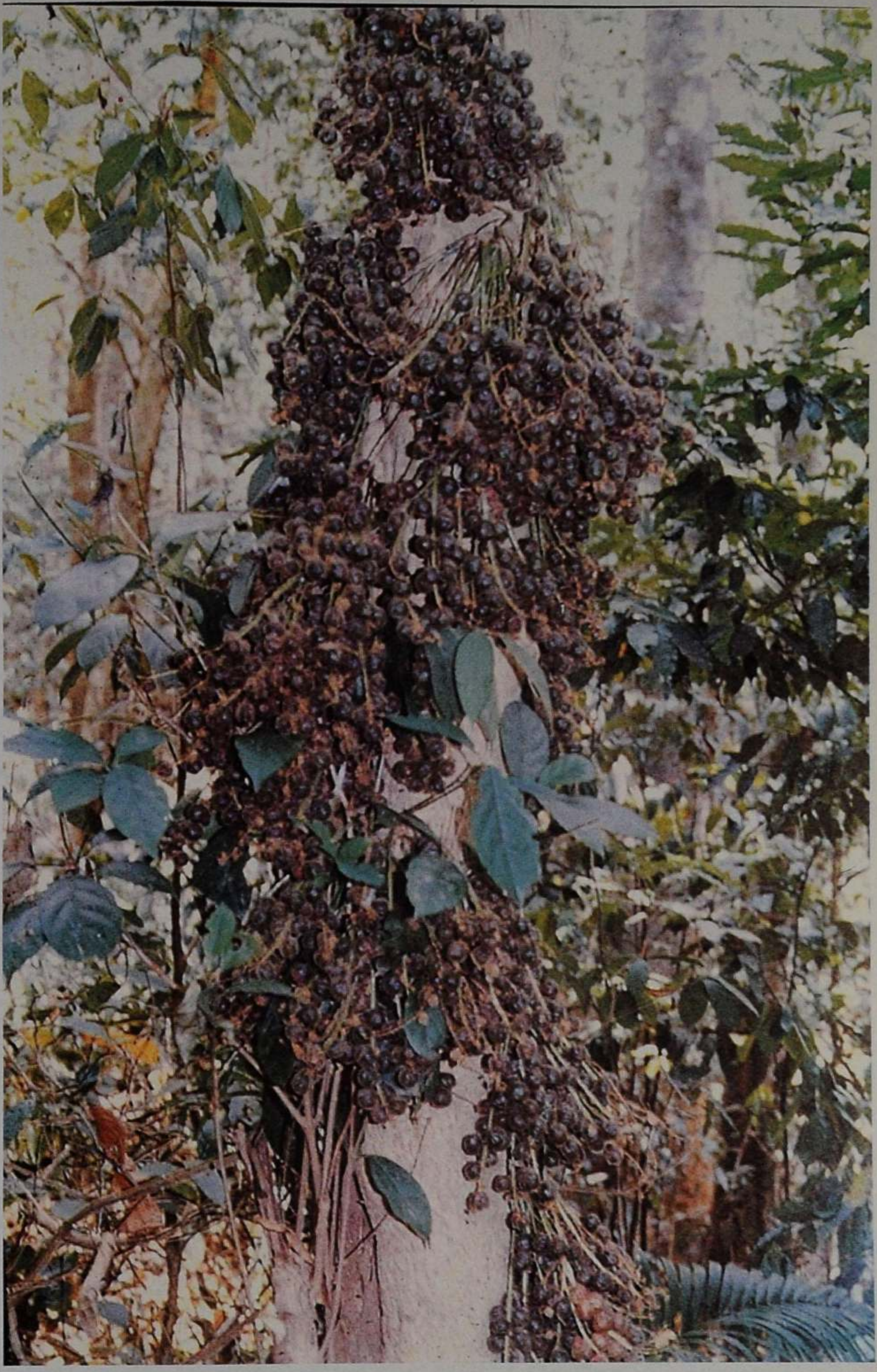
(2) Midland (Plains) region and

(3) Mountainous region.[66]

I. Coastal Region

The Coastal region with backwaters, salty swamps and foreshore vegetation, is found in Kottam, Uvari, Vijapati, Kudankulam, Perumal malai and Levingipuram. This region is all sandy with scanty and open vegetation. The flora is very poor due to physiological dryness of the soil, less rainfall, and strong wind velocity. *Spinifex littoreus* Merr., *Sesuvium Portulacastrum* L., *Atriplex repens* Reth, *Trianthema Portulacastrum* L. and *Ipomoea pes-coprae* (L.) R.Br. are commonly met with.

Suaeda nudiflora Moq. *Salicornia branchiata Roxb.* and*Arthrocnemum indicum* Moq. are some characteristic species found in salt marshy areas. Along the fore-shore regions species like *Sauropus bacciformis* (L.) Airy Shaw, *Barleria buxifolia* L., B.cuspidata Heyne, *Calotropis gigantea* R.Br., *Cleome tenella* L.f., *Corchorus tridens* L., *Cyperus arenarius* Retz., C.*compressus* L., C.*pachyrrhizus* Nees ex Boeckeler, *C. rotundus* L., *Enicostemma axillare* (Lam.) Raynal, *Eragrostis plumosa* Link, *Euphorbia microphylla* Heyne, *Evolvulus alsinoides L.*, *Fimbristylis*



Ficus hispida (Moraceae)

polytrichoides R. Br., *Gisekia pharnaceoides L.*, Glinus oppositifolius (L.) *A.DC.*, *Ipomoea pes-caprae* (L.) R. Br., *Jatropha maheswarii* Subram. & Nayar, *Launaea pinnatifida Cass.Mollugo cerviana (L.) Ser., M. pentaphylla L.*, Notonia *grandiflora* DC., *Portulaca quadrifida L., P.* oleracea L., *Spinifix littoreus Merr., Sporobolus tremulus Kunth* are commonly associated.

2. Midland (Plains) Region

The midland region lies between the coast and the Western ghats, with few discontinued hillocks covered and represented by scrub flora, and long stretches of shifting red sand locally known as 'Teri'. Palmyra tree *(Borassus flabelifer* L.) is dominant in this region. The plains can be further classified into (i) Inland sandy vegetation (ii) Vegetation of interior plains (iii) Fallow and wasteland vegetation (iv) Vegetation of tanks and canals.

(i) Inland sandy vegetation

Acacia *latronum* Willd., *Acacia planifrons* Wight & Arn. and *Dichrostachys cinerea* Wight & Arn. are the dominant species.

These are common in Kuttam, Kudangulam and Levingipuram areas. The commonly associated species are *Cleome aspera* Koen., C. *tenella* L.f., *Borreria hispida* K.Sch., *Portulaca oleracea* L. *Mollugo cerviana* Ser., *Indigofera hirsuta* L., *Enicostemma axillare* (Wam) Raynal, *Euphorbia trucalli* L., *E., prostrata Ait.*, *Jatropha curcas* L. and *J.gossypifolia* L.

(ii) Vegetation of interior plains

The interior plains represent scrub flora. Due to the high velocity of wind the trees of these regions are stunted in nature. Deficiency of water and rapid transpiration due to hot sun are also the other factors affecting the scrub flora.

The species commonly occurring in this regions are *Euphorbia antiquorum* L., E. *trucalli* L., E. *prostrata* Ait., *E.rosea* Retz., *Tylophora indica* (Burm. f.) Merr., *Pergularia daemia* (Forst.) Blatt. & McC., *Cissus quadrangularis L.*, *Lawsonia inermis* L., *Argemone mexicana* L., etc.

The trees commonly found in the disturbed areas are *Thespesia populnea Cav.*, *Morinda tinctoria* Roxb. *Tamarindus indica* L., *Ficus bengalensis* L., *Vitex negundo* L., *Borassus flabellifer* L.., and *Pongamia pinnata* (L..) Merr.

(iii) Fallow and wasteland vegetation

Due to insufficient water for irrigation and extreme heat, the lands remain mostly uncultivated. Weeds growing in these regions are: *Tridax procumbens* L., *Boerhavia diffusa* L., *Tribulus terrestris* L., *Evolvulus*

alsnoides L., *Justicia tranquebarensis* L.f., *Rungia repens* Nees, *Amaranthus spinosus* L., *Justicia glauca* Rottl., Rottl., *Alternanthera sessilis* (L.) R. Br., *Chloris barbata* Sw., *Echiinochloa colona* Link, etc.

The woody herbs and undershrubs met with are *Cleome gynandra* L., *Cassia occidentalis* L., *C. auriculata* L.., *C. tora* L., *Crotalaria striata* DC., *Croton bonplandianum Croizat* and *Clerodendrum serratum* (L.) Moon.

(iv) Vegetation of tanks and canals

During the monsoon rainy season the tanks and canals in the districts are filled with water. *Ludwigia parviflora* Roxb., *Lindernia anagalis* (Burm.) Pennell, *Polygonum glabrum* Willd.,*Ammannia baccifera* L., *Eclipta prostrata* L., *Nasaea brevipes* Kochne., *Cyperus kyllinga* Endl., *Aeschenomene indica* L., *Anteracantha longifolia* Nees, *Trapa bispinosa* Roxb., and *Cichhornia crassipes* Solms are commonly met with.

3. Mountainous Regions

The eastern slopes of Western Ghats included in this district are very rich in flora and fauna. These forest tracts include the Reserve Forests of Thirukkurangudy, Mahendragiri, Singampatti, Sengaltheri, Kalakadu, Naterikal, Manjolai, Kakachi, Nagapothigai, Ainthalaipothiga, Pothigai (Asgastyamalai), Kannikatty, Papanasam, Courtallum and Sivagiri.These have undulating topography with inhospitable terrains. Altitude ranges from 40 to 1868 m. Annual rainfall varies from 750 to 3500 mm.

The following forest types are found in these hilly regions: Southern tropical thorn forests, Southern tropical dry deciduous forests, Southern troipical moist deciduous forests, Tropical semievergreen forests, Southern tropical wet evergreen (rain) forests, Subtropical montane forests and grassland (swards) at high altitudes.

(i) Southern tropical thorn forests

This type of forests are found at foothills upto 200 m. altitude. The shrubs and trees common are *Acacia chundra* (Roxb.) Willd., a. *horrida* (L.)Willd., A. *planifrons* Wight & Arn., *Alangium salvifolium* Wang., *Albizia amara* Boiv., A.*lebbeck* Willd., *Atalantia racemosa* Wight & Arn., *Bauhinis racemosa* Lam., B. *tomentosa* L., *Zizypus cenoplia* (L.) Mill. and *Z. xylopyrus* (Retz.) Willd., *Capparis grandis* L.f., *C. sepiaria* L., *C. zeylanica* L.,, and *Dodonaea viscosa* (L.) Jacq.

(ii) Southern tropical dry deciduous forests

These forests occur at an altitude of about 350 m. The dominant trees are *Haldinia cordifolia* (Roxb.) Ridsdale, *Anogeissus latifolia* (Roxb.)

Vanda sp, (Orchidaceae)

Bedd., *Pterocarpus marsupium* Roxb., *Semecarpus anacardium* L.f. and *Terminalia chebula* (Gaertn.) Retz. Shrubs and undershrubs like *Acacia pennata* (L.) Willd., *Chassalia ophioxyloides* (Roxb.) *Craib, Desmodium triangulare* (Retz.) Merr. var. *cingestum* (Wight & Arn.) Sant. and *Phyllanthus polyphyllum* Willd. are frequently found. Herbaceous species like *Desmodium triflorum* (L.) DC. *Indigofera prostrata* Willd., *Oryza granulata* (Nees) Arn. ex Steud. and *Rostellularia pumila* Nees are commonly met with.

(iii) Southern tropical moist deciduous forests

This type of forests occurs at an altitude of about 500 m. These forests are thick with varied composition of flora and are densely populated with *Calamus spp.* The major trees are *Acronychia pedunculata*)L..) Miq., *Dalbergia coromandeliana Prain, D. latifolia* Roxb., *Pterocarpus marsupium* Roxb., *Scleropyrum wallichianum*)Wight & Arn.) Arn., *Terminalia chebula* Retz., *T. paniculata* Roth and *Vateria indica* L. The common shrubs and undershrubs are Barleria courtallica Nees. *Blachia calycina* Benth., *Helictres isora* L., *Ixora brachiata* Roxb., *Mallotus stenanthus* Muell. - Arg., *Mussaenda laxa* (Hook. f.) Hutch. ex Gamble and *Psychotria connata* Wall., *Spatholobus parviflora* (Roxb.) O. Ktze. and *Anamirta cocculus* (L.) Wight & Arn. are notable huge lianas.

(iv) Tropical semievergreen forests

This type occurs at an altitude of about 700 m. Both evergreen and deciduous elements are intermixed. The dominant species are *Antidesma menasu* Miq. ex. Tul. *Baccaurea coutrallensis*)Wight) Muell. - Arg., *Filicium decipiens* Thw. and *Gordonia obtusa* Wall. ex. Wight & Arn. *Careya arborea* Roxb. and *Terminalia chebula* Retz. are sopme of the deciduous elements. *Ancistrocladus heyneanus* Wall., *Entada pursaetha* DC. and *Gnetum ula Brongn.* are the huge lianas commonly seen.

(v) Southern tropical wet evergreen forests

This type of rain forests occur between 800 m. and 1500 m. height from MSL. The top canopy or the first layer is extremely dense and represented by the gigantic trees like *Artocarpus hirsutus* Lam., *Canarium strictum* Roxb., *Cullenia exarillata* Robyns, *Diospyros ebenum* Koen. ex Retz., *Elaeocarpus tuberculatus* Roxb., *Gluta travancorica* Bedd., *Hopea parviflora* Bedd., *H. utilis* (Bewdd. Bole and *Palaquium ellipticum* (Dalz.) Baill.

The second layer is composed of shade loving trees such as *Cinnamomum iners* Reinw., *Nageia wallichianum* (Presl) Kuntze, *Eugenia mundagam* Bourd., *Garcinia echinocarpa* Thw. etc.

Below the second layer shrubs and small trees such as *Agrostistachys borneensis* Becc., A. *indica Dalz., Antidesma menasu* Miq. ex Muell. - Arg., *Elaeocarpus munronii* (Wight) Mast., *Eugenia singampattiana* Bedd. are found.

The ground layer in the disturbed forests consists of herbs and undershrubs such as *Acranthera grandiflora* Bedd., *Begonia malabarica* Lam., *Carex filicina* Nees ex Wight. *Neurocalyx calycinus* (R.Br.ex Benn.) Robins, *Ophiorrhiza mungos* L. and *O.eriantha* Wight. *Ochlandra travancorica* (Bedd.) Benth. ex. Gamble occurs in dense patches in these forests, along streams.

Epiphytic orchids like *Aerides crispum* Lindl., *A. ringens*)Lindl.) Fischer, *Bulbophyllum tremulum* Wight, *Cymbidium aloifolium* (L.)Sw., are commonly seen.

Ferns like *Angiopteris evecta* (Forst.) Hoffm., *Arachnoides aristata* (Forst.f.) Tindale, *Asplenium cakudatum* Forst. and *Cyathea gigantea* (Wall. ex Hook.) Hultum are frequently met with.

(vi) Subtropical montane forests

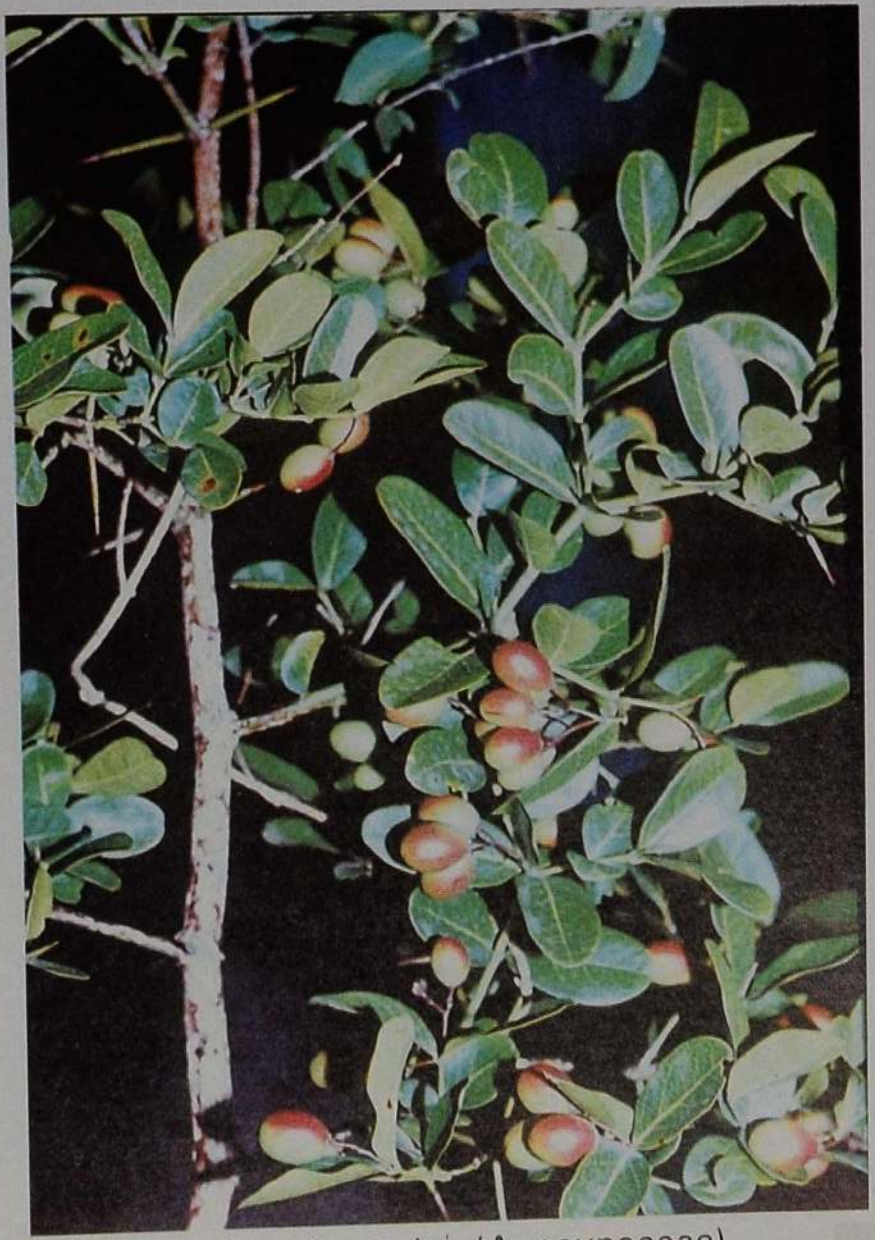
This type of forest occurs above 1500 m. In these exposed areas due to the high velocity of wind the trees are stunted in nature, hardly reaching 4 m. high and clothed with lichens, mosses, ferns and orchids. The common trees are *Aglaia elaegnoidea* (Juss.) Benth. var. *bourdillonii* (Gamble K.K.N. Nair, *Brysopyllum tetrandrum* (Bedd.) Hook. f. ex Gamble, *Canthium neelgherrense* Wight, *Euphorbia santapaui* Henry, *Hedyotis purpurascens* Hook. f., *Impatiens travancorica* Bedd., I *uncinata* Wight, *Lasianthus blumeanus* Wight, L. *cinereus* Gamble, *Polyscias acuminata* (Wight) Seem. and *Vernonia travancorica* Hook. f. Populations of *Bentinkia condapanna* Berry ex. Roxb., an endemic palm, are seen in inaccessible slopes.

(vii) Grassland (Swards) at high altitude

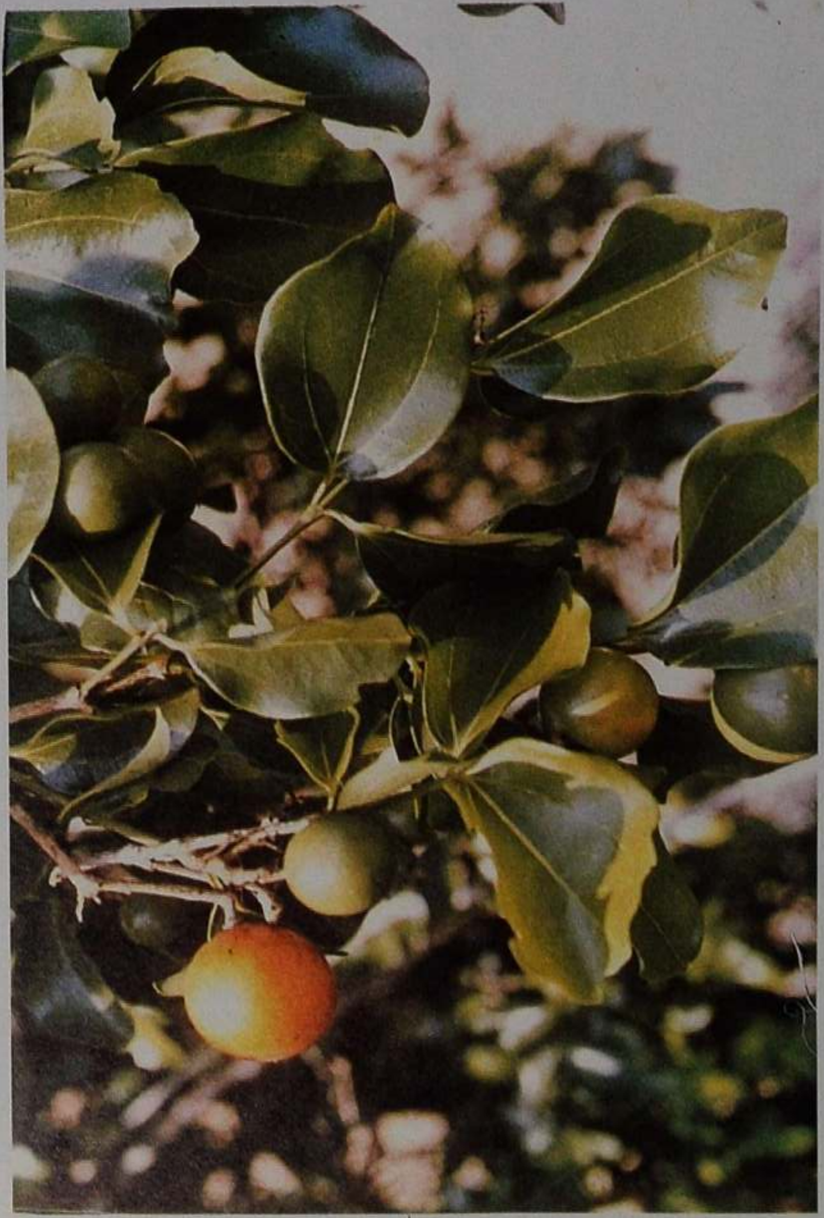
Grassy swards or savannahs in smaller dimension are seen on exposed rocky surfaces and inaccessible rocky slopes. Some of the common grasses met with are *Arundinella purpurea* Hochst. ex Steud. var. *laxa* Bor. *Chrysopogon orientalis*)Desv.) Camus, *C. aciculatus (*Retz.*)* Trin., *Eulalia phaeothrix* (Hack.) O. Kuntze, *Isachne walkeri* (Arn. ex Steud.) Wight & Arn. ex. Thw. *Themeda tremula (Nees ex Steud.)* Hack. Some herbaceous members amidst grasses are: *Acrotema arnottianum* Wight, *Centrantherum rangachariik* Gamble, *Crotolaria allbida* Heyne Roth and *Leucas vestita* Benth.

Memecylon edute (Melastometaceae)

Cycas circinalis



Carissa Carandus (Apocynaceae)



Strychnos nux-vomsica (Loganiaceae)

Srilankan Elements in the Flora

One striking peculiarity of this region lies in the large preponderance of several typical Sri Lankan plants such as: *Abarema subcoracea* (Thw.) Kosterm., *Biophylum nudum* Wight, *Chrysoglossum maculatum* Hook. f., *Eugenia rotundata* Trimen, *Fahrenheitia zeylanica*

(Thw.) Airy Shaw, *Filicum decipiens* (Wight & Arn.) Thw., *Garcinia echinocarpa* Thw., *Pavetta zeylanica* (Hook. f.) Gamble. *Rubus micropetalus* Gardn., *Andrographis ceylanica* Nees, *Memecylon hookeri* Thw., and *Antidesma walkeri* (Tul.) Pax & Hoffm.

Rare and Endemic Plants

The unique feature of this district is the occurrence of more than 100 local endemic species of plants. The following are some of the tree species. *Aglaia elaegnoidea* (Juss.) Benth. var. *bourdillonii* (Gamble) K.K.N.Nair, *Diospyros barberi* Ramas., *Elaeocarpus venustus* Bedd., *Eugenia singampattiana* Bedd., *E. rottleriana* Wight & Arn., *E. descifera* Gamble, *E.floccosa* Bedd., *Syzygium micropghyllum* (Bedd.) Gamble. Among the large number of endemic herbs, shrubs, and climbers localised in this area, a few are: *Crotolaria scabra* Gamble, *Grewia pandaica* Drumn., *Exacum travancoricum* Bedd., *Impatiens travancorica* Bedd., *Hedyotis villostipula* (Gamble) Rao & Hemadri, *Piper barberi* Gamble, *Senecio calcadensis* Ramas., and *Sonerila clarkei Cogn.*

Some of the rare species are *Hedyotis travancorica* Bedd., *H. barberi* (Gamble) Henry & Subr., *H. villostipulata* (Gamble) Rao & Hemmadri, *Knoxia linearis* Gamble, *Rhynchosia jacobii* Chandrabose & Shetty, *Taxocarpus beddomei* Gamble, *Thottea barberi* (Gamble) Ding Hou, *Vernonia heynei* Bedd. ex Gamble, and *Wendlandia angustifolia* Wight & Hook. f. *Paphiopedilum druryi* (Bedd.) Pfitz. an endangered lady's slipper orchid is also found in this district.

Changing Trends Affecting Loss of Biodiversity

Several settlements in the existing hydel and irrigation projects (Upper Tamiaraparani, Servalar, Papanasam Lower and Manimuthar) within the Reserve Forests have caused much ecological disturbances. These hydel projects have been instrumental for changes in forest type, particularly on the Mundanthurai plateau, from moist deciduous to dry deciduous indicating a shift in soil hydrology.

The upper slopes of Singampatti Reserve Forests and certain pockets of Papanasam Reserve Forest and Kalakadu Reserve Forest have been considerably disturbed due to cultivation of tea and other plantation crops.

The increase in pilgrimage to the *Pothikaimudi* the highest peak in the range, by the devotees of Agasthya Maharishi has brought some associated developments such as widening the foot/briddle path and other facilities. Intentional/accidental fire to the seasonal dry forests by the visitors has disastrous effects on the threatened plant species including endemics.

Extensive grazing by cattle belonging to the population (5000) living within the reserve and the enormous pressure on the trees for fuel-wood are the major threats to the forests.

It is gratifying to note that Agasthyamalai Hills (including Kalakadu - Mundanthurai Tiger Reserve) in SW ghats with their unique flora of biogeographical interest, high diversity and endemism have been selected as one of the Plant Diversity Centres in India, for conserving global biological diversity. Also Agastyamalai and its environs are *an ideal choice for a biosphere reserve* (Henry *et al.* 1984). The famous dictum *it all depends on the green* was perhaps forgotten in the earlier conservation interest in India which began with *big cats and large mammals*. In the ultimate analysis, it is the genetic diversity that will matter, and hence, speedy steps for the conservation of this area in its locality as a Biosphere Reserve should be undertaken so that, it will serve as an *ecological protectorate*.

An enumeration of flowering plants in the district is given in the *Appendix-3.*

Social Forestry

Tamil Nadu is the pioneer state which sowed the seeds of the concept of social forestry long back in 1960 when farm forestry scheme was introduced. By the scheme, plantations were raised outside the reserve forests. While the plantations could meet the timber, green manure, fodder and firewood needs of the rural people, the peaching in the reserve forests were controlled. The farm forests were raised along the river banks, tank porambokes, hill porambokes, etc., Later, the farm forestry was rechristened as *extension forestry*. As the role of the forests in maintaining the ecological balance and in the conservation of bio-mass, 'grow more forests', campaign has been mooted out throughout the world by various international development agencies. The Swedish International Development Agency (SIDA) came forward to assist the State of Tamil Nadu in raising Social Forests.

In the composite Tirunelveli district three social forestry divisions were formed on 1 December 1981 with headquarters at Tirunelveli, Tiruchendur and Kovilpatti. As a result of the bifurcation, the Social Forestry division of Kovilpatti and Tiruchendur have gone to Thoothukkudi district

Gloriosa Superba (Liliaceae)

Helicteres isora (Sterculiaceae)

and the entire Tirunelveli district has formed a single social forestry division with headquarters at Tirunelveli.

The farm forests raised earlier have been entrusted to the social forestry division.[67]The social forestry schemes are implemented by the agencies like Panchayat unions by utilising the manpower generated by the various rural employment schemes. In the district at an average of 700 ha. of social forests per year have been raised since 1981.[68]

FAUNA

The fauna in general represents a majority of species related to those of other parts of peninsular India. The wildlife though restricted to the Southern Western Ghats of the district, those living in the plains are equally versatile in their natural history and adaptations.

a) Mammals

Almost all the representative types of mammalian fauna occurring in other parts of the country are found here. Most of them are listed in the Red Data Book of the IUCN (now World Conservancy Union) and are in the endangered group of species in Schedule I and II of the Wildlife Protection Act of India (1972; amended 1994). The important highly endangered species of the Western ghats of the district are the *Asian Elephant, Tiger, Leopard, the Indian Bison or Gaur, Sambhur,* primates like Lion-tailed macaque and Nilgiri Langur, Nilgiri Marten, Tree Shrew, Nilgiri Tahr. Of these, Lion-tailed macaque, Tiger, Nilgiri Marten and Tree Shrew are the rare species. Certain important endangered small mammals are *Leopard Cat, Fishing Cat, Slender Loris, Malabar Giant Squirrel, Otter, the Dhole, Porcupine* and *Mouse Deer.*

The *Sloth Bear* and *Wild Boar* are moderately common and they sometimes descend to the plains too. In Mundanthurai plateau and Puliangudi scrub forests, two groups of *Spotted Deer* or *Chital* occur. The *Common* or *Hanumann Langur,* the *Bonnet Macaque,* the *Palm Civet* and *Toddy Cat* live almost in the foothills and they also come into human habitation in the plains.

There are certain instances when elephants raid agricultural crops and a stray leopard coming to the plains adjacent to the ghats.

The important mammals of the plains are the *Indian Fox, Jackal,* the *Gerbil Rat,* the *Field Mouse* and the *House Rat.* In the Kuthiraimoli, Theri extending into the Tirunelveli district along Radhapuram taluk from Thoothukkudi district, *Hyena* and *Hedgehog* are not uncommon. There was ibe ubstabce ub 1966 that a stray *Hyena* came into a village near Thisayanvilai, was mistaken for a leopard and caused minor injuries to two

men when encountered too close and it was purely an act of self-defence of this otherwise elusive animal. The incidents of Palm Civet eating away the tender coconuts in the gardens of even thickly populated towns are common.

Indian Fox and Jackal are usually nocturnal and taking refuge in burrows or in dens among rocks and moderately common in the hillocks of Nanguneri, Wolf Hill of Sivanthipatti and in Melapattam.

b) Birds

The avi fauna of the Western ghats of the district comprise most of the species of Indochinese relics which have parallel closely related genera in the northeast Himalayan ranges. Some of the important species of birds are the *Hill Myna,* the *Nilgiri Whistling Thrush, Fairy Blue Bird,* the *Malabar Great Pied Hornbill,* the *Racket-tailed Drongo,* the *Malabar Trogan,* the *Great Black Woodpecker,* etc. Other rare species of the hills are *Pallas Fishing Eagle, Pale Harrier, Crested Serpent Eagle, Crested Hawk Eagle, Black Eagle, Forest Eagle Owl, Scops Owl, Nilgiri Green Pigeon, Nilgiri Wood Pigeon, Biossom Headed Parakeet, Hawk Cuckoo, Scarlet Minivet, etc.* There are also certain migratory species of *Warblers, Flowerpeckers,* and *Flycatchers* that are winter visitors of the ghats from North India, Eastern Europe and Africa.

There are a large number of birds found in the plains as of anywhere also in the peninsular India. Certain migratory non aquatic birds are the *Paradise Flycatcher, Golden Oriole, IIndian Pitta,* etc. Aquatic migratory birds from the northern regions of India as well as abroad are usually winter visitors to various ponds of the district, extending their stay up to May-June.

Mention must be made of some important villages where innumerous birds flock during winter and spring. They are Koonthankulam, Ilamlkulam, and Ariyakulam. Special credit goes to Koonthankulam and Ariyakulam, which are well protected by the villagers themselves, and recently Koonthankulam has been made as a bird sanctuary. A few important aquatic migratory species are the *Grey Pelican, Painted Stork, Lesser Flamingo, White Ibis, Glossy Ibis, Lesser Whistling Teal, Garghany, Spotbilled Duck, Spoonbill, Openbilled Stork,* etc. Recently, *Bargeaded Goose* has been found to visit Tirunelveli district, which has been hitherto reported to have its southern most range up to Mysore. A few of these birds become residents here itself when local conditions of water availability and food are satisfied, even after June.

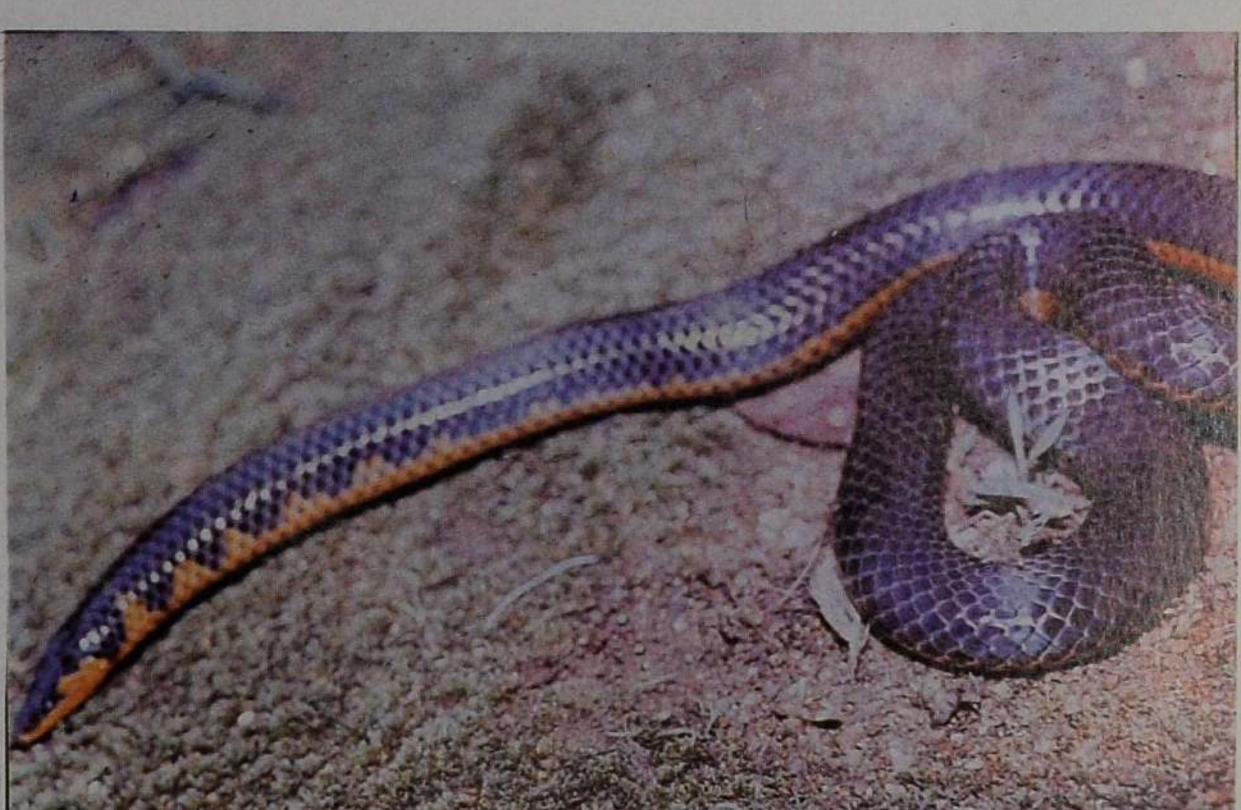
c) Herpetofauna

Reptiles and amphibians are collectively called as herpe to fauna and usually studied together as an assemblage because of their poikilothermic

Drynaria quercifolia

Capparis Zeylanica Capparidaceae

Indian Python



Xylophis perroteti

nature. More than 60 per cent of them are endemic to the ghats of Tinnevely hills. Most of them are Indo-Chinese elements, the relics of which restricted to the high rainfall regions of the hills. The peninsular plains have now become unsuitable for these rainfall species. Many of them have closely related species occurring in the Northeast India.

Reptiles

Though many species of reptiles are common in patches, they are not fully studied in this part of India. A few rare species are the *Forest Cane Turtle* rediscovered after about 100 years, the *Arboreas Shinkk (Dasia haliana)* hitherto reported only in Sri Lanka, the *Andaman Crestless Lizard (Calotes andamanensis)* hitherto supposed to be only in Andaman Islands.

Important snakes found in the ghats are *King Cobra,Indian* Rock Python, a few species of *Uropeltid snakes, Slender Coran snake, Large Shield Greenm Pit Viper, Malabar Rock Pit Viper, Hump-nosed Pit Viper, Short-nosed Green Vine snake, Forest Cat snake, Trinket snake, etc.*

A few other important species of reptiles are the Common Monitor Lizard (*Varanus bengalensis*), the *Marsh Crocodile* (introduced in the Papanasam Upper Karayar dam), the *Flying Lizard (Draci dyssymeru),* Forest Day Gecko (Cnemaspis nindica), Rock lizard (Psammophiluc dorsalis), etc.

The December 1992 floods in Tamiraparani river has brought down to the plains many Python snakes from the hills and some of them taking refuge in the fields along the banks are being exposed and caught till today. But awareness has been created in the general public not to kill them, and most of them have been rehabilitated back into the hills by the Forest Department officials.

Amphibians

Frogs, Toads and Caecilians are the amphibians found in the region. Caecilians, the legless amphibians are exclusive to the hills. *Ichthyophis* and *Geganophis* are the two genera of caecilians found in the hills. The *Green Tree frog, Rhacophorus malabaricus* is an evergreen species.The *Malabar Black Narrow-mouthed frog Limnobatrachus indicus* was rediscovered in 1996 in the upper reaches after its first description in 1811. The giant tadpoles found in the Mundanthurai river streams are of the frog *Rana malabarica.*

In the plains, the Green Frog Rana tigerina and a few other species like *Rana hezxadactyla, Rana cyanophilictis* are common. The burrowing frog *Cacopus* has become rare.

d) Fishes

Earlier fishing reports reveal certain game fishes like the *Trout,* the *Carp,* etc., as once abundant in the Tamiraparani, Manimuthar and Pachayar rivers. The Trout has been exterminated by extreme fishing and the Carp population has been reduced. In the hill streams small fishes with ventral suckers are found attached to rocks to avoid being washed off. There are incidents of huge *Eels* being caught in the hooks of fishing sportsmen.

The common species of fishes found in the plains are the *Tiger Barb Carp,* the *Front Spotted fish,* the *Tilapia* (exotic) *Channa* and *Murrel, Clarius, Saccobranchus,* the *Common Carp,* etc.

There are efforts to reintroduce the Trout in Tamiraparani by the Forest Department.

e) Invertebrate Fauna

Special mention must be made to certain invertebrates like butterflies, moths, other insects and a few other groups.

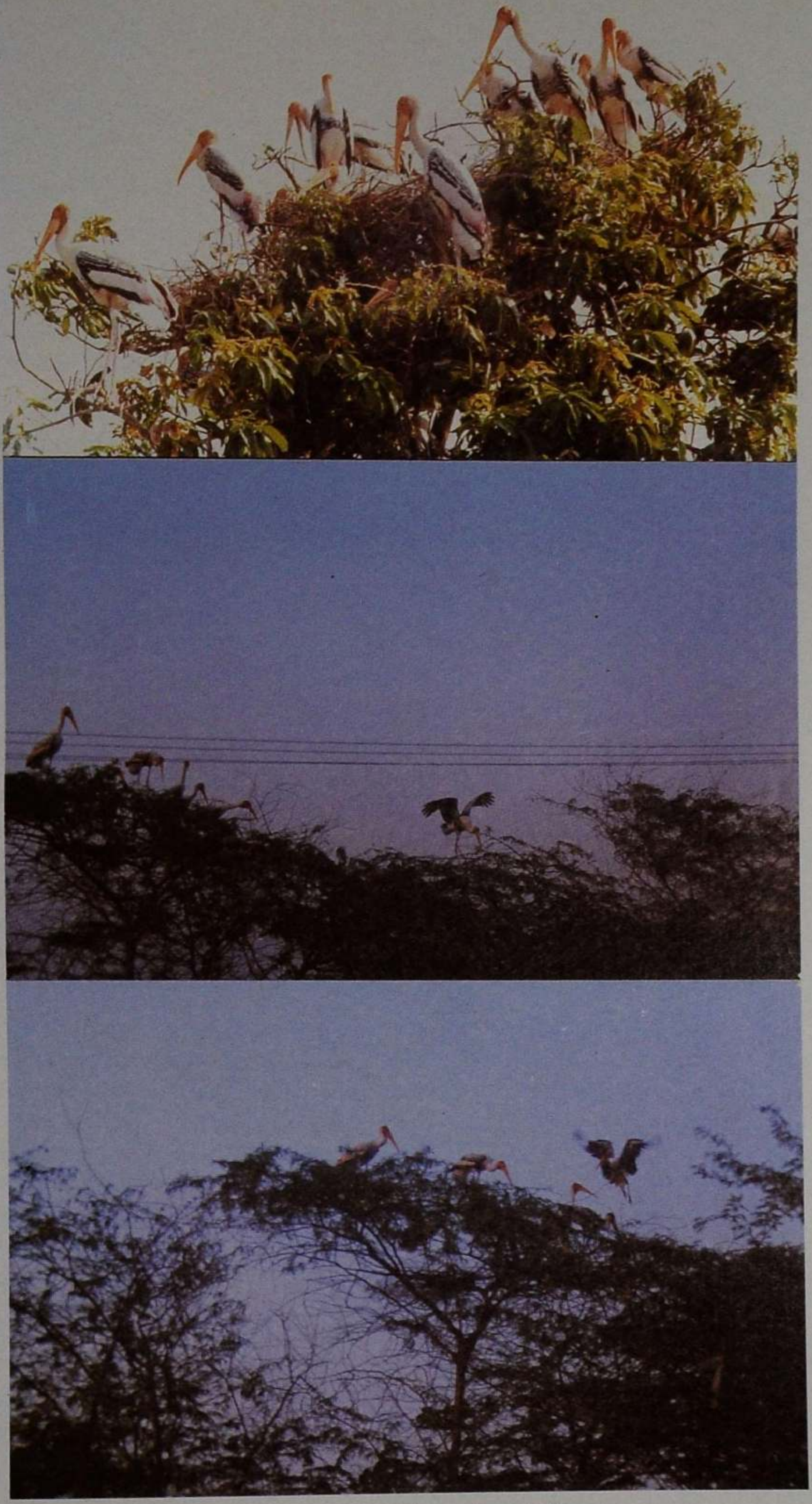
There are a few species of endemic rate Lepidopterans found in Tirunelveli district especially in the hills. The rate *Atlas moth,* the *KLunar moth, Paper Butterfly,* the *Blue Mormon,* and the *Kalllima* butterfly need special mention.

The free-living flat Helminth worm, *Bipalium* crawls on the forest floor of the evergreen patches. Scientists believe that there are more species of insects that are yet to be reported from this part of the peninsular India.

A list of fauna which are found in the district as enumerated by the Zoological Survey of India after several surveys, is presented in *Appendix - 4.*[69]

Wildlife Sanctuaries

Ancient kings considered the deforestation and bringing the land under plough as an agricultural reform. Now, the Governments all over the world consider the aforestation and the preservation of forests as the back-bone of the forest policy. The British records show that those who killed the wild animals such as elephants, tigers and lions were rewarded by the district administration suitably on the production of the skins and claws of the dead animals. Now, the State policy is to totally prohibit hunting to preserve the animals by passing related Acts.



Birds Sanctuary, Koonthankulam

In the district, there is a Tiger Reserve, Kalakadu Mundanthurai and two birds sanctuaries in Koonthakulam and Moonradaippu.

Kalakadu - Mundanthurai Tiger Reserve

Project Tiger - project for the preservation of tigers - was started by the Government of India in 1973 due to their concern for Indias dwindling wild·life. There are at present 19 Tiger Reserves spread all over the country. Each Tiger Reserve is managed by the concerned State Government with assistance from Government of India.

Prior to the *Project Tiger* Scheme of the Government of India, the Government of Tamilnadu constituted the Mundanthurai Wild life sanctuary in 1962 under the Wild Animals and Birds Protection Act 1912.[69] The area of the sanctuary was 567 sq.km. and falls within Ambasamudram taluk. Later in 1976, the Kalakadu reserve was also notified as a wild life sanctuary.[70]

In the year 1988, the two sanctuaries were merged together to form Kalakadu-Mundanthurai Tiger Reserve. The total area of the reserve is 817 sq.km. out of which, 459 sq.km. is Core zone and 358 sq.km. is buffer zone. The wild life census based on the pugmarks, conducted in 1993 shows that there are 17 tigers, 24 elephants and around 100 panthers.[71] The great diversity of geographic and climatic feature of this conservation unit has led to rich bio-diversity of fauna and flora. The premier Conservation Project nurtures, *inter-alia*, varieties of rare, threatened and endangered flora and fauna in abundance in which tiger is at the apex of the complex biotops. Out of 4390 species of flora, (175 families, 1256 genera) recorded in the erstwhile Madras Presidency, this conservation unit alone accounts for 2105 species (157 families, 872 genera), out of which, 32 are endangered. Among the fauna, nearly 17 are endangered.[72]

The Tiger Reserve is the southernmost habitat of the tigers. Other predators like panthers, jungle cats, civets, dholes, jackals, striped Hyenas are also seen here. The reptiles and the amphibians of the reserve include King Cobra, Common Krait, Russels, Viper, dark pit Viper, Monitor Lizard, Garden lizard, tortoise, crocodiles, and rare species of frogs. The avifauna of the sanctuary consists of as many as 80 species such as egrets, herons, jungle fowl, spur fowl, patridge, quills, emerald dove, minivets, bee eaters, sparrows, owls, night jars, kites, flower peekers, eagles, swifts, wagtails, wood-pecker, kingfisher, dragons, paradise fly catchers, parakeets, etc.[73]

Koonthakulam and Moonradaippu Birds Sanctuaries

The two villages of Koonthakulam and Moonradaippu in the district have been frequented by the migratory water birds during the period between January and May. The winged visitors to the villages are spot

billed or Grey pelican, little cormorant, snake bird, spoon bill, little egret, grey heron, cattle egret, pond heron, white stork, sainted stork, flamingo, cotton seal little grebe, etc. The Government have declared these villages as birds sanctuaries. The villagers also take extra care to protect these birds which find their prey in the neighbouring tanks. A technical classification of the Fauna of the district is given in *Appendix - 4*

Forest Policy

The Working Plan for the forests of the district, prescribes the following as the policy and objectives of the forest management in the district.[74]

The general objects of the management are :

1. To conserve and improve the forests in the interests of soil conservation, water supply and agriculture.
2. To exploit on sound principles of silviculture, the resources of the forests, timber, fuel bamboo, reeds, pasture and minor forest products.
3. To supply the requirements of the local forest based industries and the local population, their needs of forest produce to the extent possible, without sacrificing the principles of forest conservancy.
4. To enhance the value of the existing forest standby conversions into valuable plantations of soft wood, pines, Eucalyptus Species and acacias suitable to the locality wherever possible.
5. To augment the forest reserves by creating forests in suitable areas along the river and Caval fringes, in tank beds and poromboke lands.
6. To protect the wild life and provide them the basic essentials of existence and to develop the sanctuary.

Game laws

Hunting was considered an act of bravery often at the cost of animal lives. As many of the faunal species have become endangered or threatened, a consciousness for protecting the wild life has arisen resulting in the passing of Acts prohibiting hunting and other related acts which would cause danger to the animals. Hunting was prohibited in the forests of the districts since April 1978.[75] There are three State and two Central Acts in force in Tamil Nadu for the protection of wild life and the conservation of forests. They are Tamil Nadu Forest Act, 1882, Tamil Nadu Preservation of Private Forest Act, 1949 and Tamil Nadu Hill area (Preservation of Trees) Act, 1955, and wild life (Protection) Act, 1972 and Forest Conservation Act 1980.

District Forest Administration

In 1847, an Executive Engineer, incharge of Malabar and Coimbatore region wrote to the Government that forests in his jurisdiction were denuded for the timber by the local timber merchants. It opened the eye of the government in respect of forest administration and it was felt that the forests had to be conserved. Consequently the office of the Conservator of Forests for the Madras Presidency was created in 1856. This is the first milestone in the history of the forest administration of the state. Subsequently, dense forests were declared Reserve Forests by the Government and officials for the Conservation of the forests were appointed.[76]

In 1864, Captain Beddome was appointed by the Government to advise the Collector of composite Tirunelveli district, in matters relating to forest management.

Most of the forests were then claimed as private property by the Zamindars, and temples and mutts. The Kalakad forests were claimed by Thirukkarunguli mutt and the issue was decided by the High Court in 1909 in favour of Government. In 1865, the whole of the Ghat forests of Nanguneri taluk, excluding the area claimed by Singampatti Zamin were brought under the Conservancy Rules and were placed incharge of a Duffadar and three 'peons' under the direct supervision of the Sub-Collector of Cherenmahadevi. The system proved a failure and in 1866, Captain Fullarton was appointed as the first district forest officer.

The credit of organising a Forest Department in the district goes to the then Collector, Puckle. He prohibited charcoal burning and clearing of forests and requested the grazing and cutting trees for timber or fuel.

The private forests remained in the district until the passing of the Estate Abolition Act, 1948. As per the provisions of the Act, private forests in the district including the forests of the Singampatti Zamin were taken over by the Government.

Puckle, the then Collector marked boundary lines called 'Cairn lines' - to separate the villages and the forests. More or less, the line he marked is now the reserve boundary. In 1878, a Forest Committee visited the district forest and recommended, (i) to extend the Puckle's *Cairn mark* to the entire forest; (ii)to Constitute more reserve forests; (iii) not to issue fresh *patta* (title deed) in Ghat forests; (iv) grazing to be permitted on payment; (v)to conserve private forests and (vi) to regulate the grazing in the forests.

In 1882, Dr.Brandis, an expert in forestry visited the forests of the district and submitted a Report to the Government. He recommended to

take measures to prevent fire in the forests. Accordingly, fire watchers were recruited among the local people. Thus, started the forest administration in the district and about 110 District Forest Officers had served in the district so far.

From 1956 to 1977, there were two forest divisions, Tirunelveli North and Tirunelveli South, each headed by a District Forest Officer having headquarters at Tirunelveli and Nagercoil respectively. With effect from 1977, the divisions were reconstituted, and redesignated as District Forest Officer, Kanniyakumari and District Forest Officer, Tirunelveli. So as to give importance to the wild life preservation, conservation and protection, the Kalakadu and Mundanthurai sanctuaries were reconstituted in 1977. As per the reconstitution, the entire composite Tirunelveli district barring the Kalakadu and Mundanthurai area and a small section of Panagudi in the extreme south of the district forms the Tirunelveli Forest division. The division now has jurisdiction over the Thoothukkudi district also. The head of the division is the District Forest Officer assisted by five ranges. The division has been divided into five forest ranges with headquarters at Tirunelveli, Sengottai, Kadayanallur, Puliyangudi and Sivagiri. There are other supporting staff consisting of technical officers, foresters, forest guards, watchers, etc.

Prior to 1989, there was a wild life warden for the sanctuaries of Kalakad and Mundanthurai. Now, the Kalakad-Mundanthurai Forest Reserve is headed by a Field Director in the rank of a Conservator of Forests with headquarters at Palayamkottai. He is assisted by a Deputy Director and a Forest Ranger at the headquarters and one Deputy Director at Ambasamudram looks after the territorial administration and protection of Kalakadu Mundanthurai Tiger Reserve and is assisted by seven territorial Range Officers with headquarters at Kalakadu, Mundanthurai, Ambasamudram, Papanasam, Kadayam, Upper Kodaiyar and Thirukkurangudi. An extent of 77 sq.km.from Kanniyakumari district has been added to the Kalakadu - Mundanthurai Tiger Reserves in Upper Kodaiyar.One Zoo Development Officer assists the Field Director in preparation of micro plans and implementation of activities for economic development of about 167 villages situated along with the periphery of Kalakadu Mundanthurai Tiger Reserves under the Free Project financed by the World Bank with objectives to reduce biotic interference on the eastern slopes of the KMTR facing the fringe villages. The Free Project is a five year project (1994-95 -1998-99). The Economic Development Officer is assisted by the Assistant Wild life Wardens with Headquarters at Kalakadu, Ambasamudram, Mundanthurai and Thirukkurungudi.The Rangers are assisted by the foresters, forest guards, forest watchers, wildlife watchers etc. There are Assistant Wildlife wardens in Mundanthurai, Ambasamudram, Kalakadu and Tirukurunkudi.

A small stretch of forests in Panagudi in the extreme south of the district comes under the jurisdiction of the District Forest Officer, Nagercoil.

Medicinal Plants Conservation Area, Courtalam

A significant aspect of the forest management of the district which needs mention is the step taken by the department to conserve the rare medicinal herbs in and around Courtalam. An area of 200 ha. has been declared as the conservation area. Funding for the scheme is provided by a voluntary orgnisation called Local Rural Health Tradition based at Bangalore. The Government of India also allotted funds for the scheme through the voluntary organisation. In addition to the Medicinal Plants Conservation Area, Courtalam (under District Forest Officer, Tirunelveli Division) an extent of 150 ha. in Mundanthurai plateau in Papanasam Reserve Forest has been declared as the Medicinal Plant Conservation Area, Mundanthurai in the Kalakadu-Mundanthurai Tiger Reserve. A list of Medicinal Plants in the district is given in the Chapter on *Medical and Public Health*.

CLIMATE

The district has a hot tropical climate. The summer season which is particularly oppressive is from March to May. The south west monsoon season which begins in June lasts till September. The period from October to December is the northwest monsoon season, the associated rains confined to the first half of the season.[77]

Rainfall

Records of rainfall in the district are available for 16 stations for sufficiently long periods. The details of the rainfall at these stations and for the district as a whole are given in *Appendix-5*. The average annual rainfall in the district is 853.6 mm. In a narrow belt of hilly tract in the western border of the district, on the eastern side of the western ghats, the rainfall is heavier. The rainfall in the district, in general, decreases from west to east. The main rainy season in the district is the period from October to the middle of January. In the summer season some rain, mostly as thundershowers, is received. In the southwest monsoon season, particularly in the first half, rainfall is more in the western half of the district than in the eastern half. For the district as a whole, the rainfall in the post monsoon and northeast monsoon season constitutes, 56 per cent, of the annual rainfall. November is generally the rainiest month. The variation in the annual rainfall from year to year in the district as a whole is not large. During the eighty year period from 1901 to 1980, the highest annual rainfall, 174 per cent of the normal, occurred in 1914 and the lowest annual rainfall, 58 percent of the normal, occurred in 1975. During this eighty year period the annual rainfall in the district was less than 80

per cent of the normal in 14 years. Two consecutive years of such low rainfall occurred twice during this period

It will be seen in the *Appendix - 6* that the annual rainfall in the district was between 601 and 1100 mm. in 60 years out of 80. On an average, there are 50 rainy days (days with rainfall of 2.5 mm or more) in a year in the district. This number varies from about 70 to 90 in the hilly tracts in the west and from 29 at Cheranmahadevi to 82 at Sengottai in the rest of the district.

The heaviest rainfall in 24 hours recorded at any station in the district was 317.5 mm. at Sivagiri on 29th October 1929.

Temperature

There is only one meteorological observatory in the district, at Palayamkottai. The records of this observatory may be taken as fairly representative of the conditions of the district. In the day time the coastal regions are cooler than the interior parts by about a degree or so in the summer and southwest monsoon seasons and warmer by one to two degrees during the rest of the year. From about the middle of February, temperature increases steadily. In May which is usually the hottest month in the interior, the mean daily maximum temperature is 37.1° C. The weather is oppressively hot in May and June and the maximum temperature sometimes reaches 45° C. Thunder showers on some afternoons during April and May bring welcome relief. The afternoon sea breeze also brings some relief in the coastal parts. With the onset of the southwest monsoon by the end of May or beginning of June, there is some drop in temperature. By about the middle of October, both day and night temperatures decrease appreciably. The period from November to January is the coolest part of the year with the mean daily maximum temperature of about 30 to 31°C in the interior parts. The mean daily minimum in these months is about 22 to 23 ° C in the district in general.

Humidity

The relative humidity in general, during the year, is between 55 and 65 per cent in the interior parts of the district, except during the northeast monsoon season, when it is over 65 per cent. The coastal parts are comparatively more humid.

Cloudiness

During the months of April and May, the skies become heavily clouded and threatening in the afternoons on many days when thunderstorms follow. In the southwest and northeast monsoon seasons, the skies are heavily clouded or overcast.

Winds

Winds are generally light to moderate in strength. There is some strengthening in winds during the southwest monsoon period. While in the interior parts of the district, wind force decreases after September, in the coastal region wind speed increases during December and January, winds blow mostly between northwest and west during the period May to September. During the period October to February, winds are mainly northeasterly or northerly.

Special Weather Phenomena

Depressions and cyclonic storms originating in the south Bay of Bengal, during the post monsoon and the beginning of the northeast monsoon seasons, sometimes move in a westerly to westnorth, westerly direction and reach the district or its neighbourhood causing widespread heavy rain and very strong winds.

Thunderstorms occur during the period March to May and September to November. The increase of the thunderstorms being generally greater in the western portions of the district

The *Appendix-6* give the temperature and humidity, mean wind speed and special weather phenomena respectively for Palayamkottai.[78]

Seismicity

History of past 200 years for which the records are available in our literature shows that earthquakes of slight to moderate intensity are experienced occassionally in Tamil Nadu. The significant earthquakes that occurred in Tamil Nadu State were the earthquake of 9, February 1923, and, the Coimbatore earthquake of 8 February 1900. The earthquake of 9, February 1823, was felt from Sri Lanka to Madras and the earthquake of 8, February 1900 was felt widely in Tamil Nadu State. In addition, earthquake of slight intensity are also experienced occassionally in Tamil Nadu State.

The tectonic framework shows that the area is not far from the eastern margin of Peninsula. Studies show that the crustal areas were uplifted in the quaternary period and the bottom of the Bay of Bengal subsided. The contact of these areas, which had different signs of movement, is situated near the coast in the zone of the shelf and its oceanic slopes. Faults are believed to exist in these areas where earthquakes may originate. Swarm type activity in the area is attributed to local crustal adjustments. Due to close proximity of faulted Western ghats and Cardamom mountains which are seismically active and also due to above tectonic features, the area may experience higher intensity up to VII on Modified Mercalli (M.M) scale (specifications enclosed).

In the Seismic Zoning Map of India published by Bureau of Indian Standards (IS : 1893 : 1984). Tirunelveli district and Thoothukkudi district lie in Z one II, which corresponds to seismic intensity VI on M.M.scale. However, the western part of the district is close to zone III which corresponds to seismic intensity VII.

Studies made in USA and other advanced countries reveal that intensity VI on M.M.scale corresponds to a range of horizontal acceleration of 5-175 on / sec^2 or an average of 40 cm/sec^2 and intensity VII corresponds to a range of horizontal acceleration 18-140 cm/sec^{2}or an average of 67 cm/sec.^{2}This wide range of acceleration is due to the fact that structures founded on soft filled ground experience much larger acceleration than those founded on hard rock. The choice of seismic factor depends upon the type of structures and the economic aspects. For weaker foundations seismic factor may be suitably increased. For vertificial acceleration, the general practice is to take half the value of horizontal acceleration.[79]

Modified Mercally Intensity scale (Abridged) and a list of earthquakes occurred in the Seismic Zone covering the district from 1805 to 1990 are given in *Appendix-7.*

APPENDIX - 1

Blockwise Groundwater Potential in Tirunelveli District As in January 1992

Sl. no.	Name of Blocks	Ground water recharge MCM	Utilisable ground water recharge MCM	Net ground water draft MCM	Balance ground water available MCM	Probable number of wells feasible for development
1.	Ambasamudram	23.70	20.14	4.35	15.79	855
2.	Alangulam	107.00	90.95	87.59	3.36	182
3.	Cheranmadevi	32.41	27.55	6.10	21.45	1162
4.	Kurivikulam	102.18	86.85	60.92	25.93	1405
5.	Kilpavur	50.23	42.70	28.00	14.70	796
6.	Kadayanallur	56.96	48.42	26.09	22.33	1210
7.	Sankarankoil	67.78	57.61	40.18	17.43	944
8.	Sengottai	32.04	27.23	7.81	19.42	1052
9.	Vasudevanallur	132.86	112.93	72.51	40.42	2189
10.	Melaneelithanallur	52.86	44.91	39.05	5.86	317
11.	Tenkasi	51.96	44.17	2.39	41.78	2263
12.	Pappakudi	33.28	28.29	11.76	16.53	896
13.	Kadayam	44.72	38.01	19.85	18.00	983
14.	Kanur	87.36	74.26	26.31	47.95	2597
15.	Palayamkottah	66.71	56.70	16.53	40.17	2176
16.	Kalakkadu	5.74	38.88	20.90	17.98	974
17.	Nanguneri	88.02	74.82	18.29	56.33	3062
18.	Radhapuram*	43.81	37.24	27.26	9.98	541
19.	Valliyur*	64.09	54.47	27.61	26.86	1455
		1183.69	1006.13	543.50	462.63	25059

* Excluding saline area

Source : Report from Thiru.S.Swaminathan, Chief Engineer,(Ground Water) Public Works Department, Madras, dated 9th May 1995.

APPENDIX - 2

List of Reserve Forests in Tirunelveli District

Location, area and the dates of notification as Reserve Forests Tirunelveli Range

	Area in ha.	*G.O.Ms. No.*	*Date*
1	*2*	*3*	*4*
1. Kaliavoor	64.00	565	8.7.1889
2. Muthur(Wolf Hill)	343.37	474	22.9.1896
3. Thaliyuthu	560.55	368	4.8.1896
4. Melapattam	404.86	588	3.12.1897
5. Gangaikondan	563.16	383	2.8.1898
6. Karumalai	1258.24	16533 FR 111/00	11.8.1920
7. Mullakad hare island	486.22	297	3.11.1923
8. Valianad Hill	1896.32	976	14.10.1931
9. Chalikulam East block	122.51	1359	14.1.1979
10. Chalikulam West block	560.26	16013 FR	19.9.1980
11. Kudiramozhi Theri	5581.74	636	21.6.1982
12. Sivalaperi	86.29	149	10.4.1991
Courtalam Range			
1. Kadayanallur - RF Upper slopes	1459.54	11	20.12.1833
2. Krishnapuram upper slopes	1480.03	11	20.12.1833
3. Courtalam (Upper slopes)	2974.43	11	20.12.1883
4. Kottamalai Reserve	387.70	304	24.10.1889
5. Kavalkattuparambu	150.34	202	24.10.1889
6. Chinnakadu	562.46	248	9.6.1890
7. Extension-I of Courtalam No.3 and lower slopes	687.69	178	10.4.1891
8. Kadayanallur upper slopes	474.34	176	10.4.1891
	8.02	outer slopes	
9. Addition to Chinnakadu	0.36	28	15.12.1891
10. Alkondal Nilliyuthu and Shehmalai	66.02	281	7.6.1898

APPENDIX - 2 (Contd.)

		Area in ha.	G.O.Ms. No.	Date
	1	2	3	4
11.	Krishnapuram upper slopes extension	788.83	166&178	14.3.1901
12.	Extension-III to Courtalam No.3 lower slopes	58.20	231	5.5.1900
13.	Extension-II to Courtalam No.3 lower slopes	53.87	205	21.5.1902
14.	Vasudeva Estate	65.61	165	22.3.1910
15.	Panchantangi estate	29.48	532	15.11.1911
16.	Kottamalai Reserve addition	7.80	18	21.12.1911
17.	Kadayanallur addition 9 small kits	13.41	53	18.1.1912
18.	Kottamalai Reserve extension	55.73	529	21.11.1912
19.	Krishnapuram upper slopes addition	5.03	473	29.10.1912
20.	Old.S.No.1357 paster Illagi	12.76	49	17.1.1913
21.	Additional to Courtalam RF T.Parvatham estate	10.73	470	6.10.1915
22.	Hope estate	74.26	17	9.1.1920
23.	Okkanindran pothai including	227.60	50	12.1.1930
24.	Extension IV to Courtalam	2.52	185	22.5.1933
25.	Vairavankulam	1598.43	52	23.1.1980
26.	Chockampatty	891.21	50	12.1.1980
27.	Vallakal Parambu	48.00	1131	18.12.1970
28.	Uthumalai	1285.94	16945 FR III 80-2	4.2.1980
Sengottai Range				
1.	Kadayanallur Upper Slopes (portion)	580.37	11	20.12.1883
2.	Vadagarai Melpidagai No.3(b)	176.26	178	10.4.1891
3.	Vadagaraikilpidagai 3-C-1	235.87	178	10.4.1891
4.	Puliyarai	4106.94	--	17.9.1901
5.	Vellakkak Theri	346.80	--	10.12.1907 and revised on 22.4.1912.

6.	Vadagarai -do- North & South A & C.	28.74	438	27.9.1912
7.	Achanpudur grazing block-I	58.38	--	--
8.	Achanpudur grazing block-II	88.89	--	--
9.	Ayikudi grazing block	92.34	--	--
Sankarankoil Range				
1.	Puliyangudi Chintamani Vasudevanallur upperslope	6495.55	11	20.12.1823
2.	Vasudevanallur lower slope	4250.88	176	10.4.1891
3.	Chintamani blocks A & S	130.19	231	19.5.1899
4.	Narayanapuram	158.08	193	29.3.1911
5.	Addition to Vasudevanallur	7.41	414	19.9.1912
6.	Addition to Tirumalapuram	0.90	437	22.10.1912
7.	Addition to Nalapuliyangudi	3.58	411	19.9.1912
8.	Addition to Melachintamani	2.52	431	22.10.1912
9.	Addition to Narayanapuram	2.86	440	22.10.1912
10.	Kanam Parambu	21.28	1358	12.12.1979
11.	Tirualainaickenpudukudi	1157.38	52	12.1.1980
12.	Sivagiri	6964.16	21	8.1.1980

APPENDIX - 3

An enumeration of the Flowering Plants of the district*

In the enumeration, the families are broadly arranged in the sequence of Bentham and Hooker's system with present day limitations of certain families. Each Family name (in *capitals*) is followed by reference to Flora of Tamil Nadu (FTN) vol., 1- 3 (1983 - 1989). 1639 Species belonging to 167 families have been treated. The genera and species in a family are arranged alphabetically. The treatment of each species include the correct name followed by relevant synonyms, if any, in parenthesis. Local Tamil name(s) followed by English name, if any are given next. Short descriptive notes on habit, flower colour, etc., occurrence of the species, Economically important (including medicinal) species are marked *E* at the end.

★ *Survey of Flora of Tirunelveli District* was conducted by Dr.A.N.Henry, Joint Director (Retired), Botanical Survey of India, Coimbatore, exclusively for Tirunelveli District Gazetteer.

RANUNCULACEAE (FTN 1: 1-2

Clematis munroiana Wight. Climbing shrub in hilly ranges ; fl. nodding. Rare in hillyranges.

C. Smilacifolia Wall. Climbing shrub. Rare in Ghat forests.

Naravelia zeylanica (L.) DC. Climbing shrub; leaves 3-foliolate, terminal leaflet modified into tendril; fl. greenish yellow; achenes feathery. Fairly common.

DILLENIACEAE (FTN 1:2)

Acrotrema arnottianum Wight . Herb with woody rhizome; fl. yellow. Rare in hilly slopes.

Dillenia pentagyna Roxb. நாய் தேக்கு. Deciduous tree in dry forests; fl. yellow, clustered on old wood. Fairly common. E

MAGNOLIACEAE (FTN 1: 2-3)

Michelia champaca L.செண்பகம். Evergreen tree; fl. yellow, fragrant. Mostly cultivated. E

ANNONACEAE (FTN 1: 3-7)

Alphonsea lutea (Roxb.) Hook. f. & Thoms.Tree; fl. small, reddish - green; carpels tomentose, yellow. Rare.

Alphonsea sclerocarpa Thw.Tree with glabrous branchlets. Occasional in lower hills.

Alphonsea zeylanica Hook. f. & Thoms. Tree in evergreen forests. Occasional.

Annona muricata L. மூன்று சீத்தா. Small tree. Cult. its fruits. E

Annona squamosa L. சீத்தா. Small tree. Cult. for fruits. E

Annona reticulata L. ராம் சீத்தா. Tree. Cult. for fruits. E

Artabotrys hexapetalus (L.f.) Bhandari. மனோரஞ்சிதம். A straggler, often cult. for fragrant fl. E

Cananga odorata (Lam.) Hook.f. & Thoms. மாமனோரஞ்சிதம். Tree. Cult. for fragrant fl. E

Desmos lawii (Hook.f. & Thoms.) Safford. Large shrub in lower elevations. Common.

Goniothalamus rhynchantherus Dunn. Small tree. Rare in high ranges.

G. thwaittesii Hook.f. & Thoms. Small tree. Rare in moist forests.

G.Wightii Hook.f. & Thoms. Tree. Occasional in evergreen forests. E

Meiogyne pannosa (Dalz.) Sinclair. Tree. Occasional in moist forests.

Miliusa eriocarpa Dunn சக்கடா மரம் A shrub; fl. maroon; fr. clustered, 5-6 monocarps. Common in hills.

M.montana Gard. ex Hook.f. & Thoms. Shrub; fl. fragrant, white. Occasional in high altitudes.

M.nilagirica Bedd. A large shrub. Fairly common in high ranges.

M.tomentosa (Roxb.) Sinclair. A large tree. Fairly common in deciduous forests.

M.wightiana Hook. f. Thoms. Small evergreen tree. Occasional in hills.

Mitrephora heyneana (Hook.f. & Thoms.) Thw. Small tree. Fairly common in hilly regions.

Orophea thomsonii Bedd. Small tree. Rare in hills.

O. uniflora Hook. f. & Thoms. Small tree. Rare in hills.

Polyalthia cerasoides (Roxb.) Bedd. Tree; fl. green. Common in deciduous forests.

Polyalthia korintii (Dunal) Thw. Shrub. Occasional in hills.

P. longifolia (Sonner.)Thw. Avenue tree; fl. greenl ripe fr. yellow. Mostly cultivated. E

P.rufescens Hook. f. & Thoms. Tree; branches tomentose. Very rare.

P. suberosa (Roxb.) Thw. Small evergreen tree. Fairly common in low elevations.

Popowia beddomeana Hook. f. & Thoms. Much branched tree. A threatened species in hills.

Sageraea dalzelii Bedd. Evergreen tree with black bark.

Uvaria narum (Dunal) Wall. ex Wight & Arn. Large woody climber; fl. maroon; fr. 10-15 monocarps, clustered heavy, ripe orange red. Occasional. E

MENISPERACEAE (FTN 1: 7-8)

Cissampelos pareira L. var. **hirsuta** (Buch. - Ham. ex DC.) **Forman** அப்பட்டா. Climber, hairy; fl. green; fipe fr. red, subtended by ear shaped bracts. Very common in dry plains and foothills. E

Cocculus hirsutus (L.) Diels கட்டுக்கொடி. Climber, hairy; fl. green; fipe fr. purple. Common in dry localities. E

Cocculus pendulus (Forst.)Diels விலும்பி. Woody climber in dry forests; fl. greenish-yellow. Common in dry regions. E

Cyclea arnottii Miers. Climbing shrub. Common in dry regions.

Cyclea peltata (Lam.) Hook.f. & Thoms. Climbing shrub; fl. green; fr.white, pilose, Occasional in dry hills.

Pachygone ovata (Poir.) Miers ex Hook.f. & Thoms. கட்டுக்கொடி. Large climber; fl. minute, white, scented; fr. purple. Fairly common in dry plains and foothills. E

Stephania Japonica (Thunb.) Miers. Climbing shrub; fl. green; fr. red. Fairly common in lower hills. E

Stephania wightii (Arn.) Dunn. Climbing shrub. Occasional in forest areas. E

Tiliacora acuminata (Lam.)Hook.f. & Thoms. பெருங்கட்டுக்கொடி. Large evergreen climber; fl. yellow; fr. red. Fairly common in lower hills.

Tinospora cordifolia (Willd.) Miers ex Hook. f. & Thoms. சிந்தில். Climber, stem scucculent; fl. yellow at the nodes of old stem; fr. red. Common in forests and among bushes.

NELUMBONACEAE (FTN 1: 9)

Nelumbo nucifera Gaertn. தாமரை. Sacred lotus. Large erect herb in shallow waters and ponds. Fl. rose-coloured , used for worship. Occasional.

NYMPHAEACEAE (FTN 1: 9)

Nymphaea nouchali Burm. f. Aquatic herbs. Fairly common in backwaters, tanks and ponds. E

Nymphaea pubescens Willd. அல்லி. Water Lily. Aquatic herb. Fl. rosy white. Fairly common in ditches and tanks. E

PAPAVERACEAE

Argemone mexicana L. பிரம தண்டு. Naturalised weed. Thorny herb; fl. yellow; fr. spiny, dehiscence apical. Common in waste places and fallow fields. E

CRUCIFERAE (BRASSICACEE) (FTN 1: 9-10)

Brassica juncea (L.) Czern & Coss. Indian mustard. A tall erect branching herb; fl. yellow. Seeds for cooking and oil. A subsidiary crop. E

Brassica nigra (L.) Koch கடுகு. Black mustard or True mustard. A rigid branched hispid annual herb; cultivated.

Raphanus sativus L. முள்ளங்கி. Radish. A herb cultivated for its fleshy roots mostly in the hills.

CAPPARACEAE (FTN 1: 12-15)

Cadaba fruticosa (L.) Druce. Straggling shrub; fl. green; ripe fr. red. Common in waste land and foothills. E

Cadaba trifoliata (Roxb.) Wight & Arn. விழுதி. Large shrub; fl.green. Occasional in scrub forests.

Capparis brevispina DC. Dense shrub or slender tree; fl. cream-coloured. Occasional in dry forest tracts.

Capparis divaricata Lam. Shrub/tree; bark fissured; fl. green; ripe fr. red. Fairly common in dry forests on stony land.

Capparis diversifolia Wight & Arn. தொரட்டி. Shrub 1-2 m tall. Occasional in dry forest areas.

Capparis fusifera Dunn. A shrub + 2 m tall. Occasional in deciduous forests.

Capparis grandis L.f. Unarmed tree; wood white, durable; bark furrowed; fl. green; fr. red. Occasional in hilly forests.

Capparis moonii Wight. A large woody climber; fl. large. Rare in lower hills.

Capparis parviflora Hook.f. & Thoms. A spreading shrub; fr. pisiform. Rare in hilly forests.

Capparis rheedii DC. Shrub/tree. Rare in hill forests.

Capparis roxburghii DC. Large woody climber. Fow in hilly tracts.

Capparis sepiaria L. தொரட்டி. Thorny shrub; fl. white; fr. blue. Frequent in dry forests and foothills.

Capparis zeylanica L. ஆதண்டை. A large thorny climber; fl. white-purple; fr. red. Occasional in dry forests.

Crateva magna (Lour.) DC. மாவிலிங்கம். Tree. Occasional along river banks at lower elevations.

Maerua apetala (Roth) Jacobs கிறுவள்ளி. Unarmed tree; fl. small, dark green in axillary and terminal racemes. Occasional in dry forest tracts.

Maerua oblongifolia (Forsk.) A. Rich. பூமிச்சக்கரை. Large woody climber; fls. greenish yellow in terminal corymbs. Occasional in dry forest areas.

CLEOMACEAE (FTN 1: 15)

Cleome angustifolia Forsk. Annual herb; fls. yellow. Occasional in dry sandy places.

Cleome burmannii Wight & Arn. Annual herb; fls. purple. Frequent in cultivated lands and dry places.

Cleome gynandra L. Annual herb; fl. white. Very common in the plains and at low elevations.

Cleome monophylla L. Weed of cult. and waste lands; fl. pink. Common in the plains.

Cleome viscosa L. நாய்வேளை. An erect annual herb, viscid, foetid; fl. yellow. Common in fields and waste places.

VIOLACEAE (FTN 1: 16)

Hybanthus enneaspermus (L.) F.v.Muell. ஓரிலைத்தாமரை. Erect herb; fl. rose; fr. globose. Common in grassy places, field roadsides and open forest lands.

Hybanthus travancoricus (Bedd.) Melch. Herb/shrub; fl. pink. Threatened; rare in forest undergrowth.

Viola pilosa Blume Herbs with leafy stem. Occasional at hill tops.

BIXACEAE (FTN 1: 17)

Bixa orellana L. குரங்கு மஞ்சள். Small evergreen tree; fls. white or purplish, few together in terminal panicles. Capsule reddish brown, softly bristly. Mostly cultivated; also run wind in the hilly regions.

FLACOURTIACEAE (FTN 1: 17)

Casearia esculenta Roxb. Small tree. Fairly common in hilly regions.

Casearia rubescens Dalz. Large shrub. Occasional in evergreen forests.

Casearia wynadensis Bedd. A small tree, villous. Rare in hilly regions.

Flacourtia indica (Burm.f.)Merr. (=*A.sepiaria* Roxb.) சொத்தைக்களா. Stiff shrub; fl. cream with swarms of bees; petals O; ripe fr. red. Common in scrub forests and on rocky hills. E

Homalium Jainii Henry & Swamin. Tree; fl. greenish yellow. Rare in dense evergreen forests.

Homalium travancoricum Bedd. Trees,ornamental. Rare in evergreen forests at low level.

Hydnocarpus alpina Wight Large evergreen tree. Occasional in hilly regions. E

Hydnocarpus laurifolia (Dennst.) Sleumer மரவெட்டி. Large evergreen tree. Occasional in hilly tracts. E

Scolopia crenata (Wight & Arn.) Clos. Tree; branched spines on old wood. Fl.cluster, showy, white, fragrant. Fr. globose. Fairly common in hilly regions. E

PITTOSPORACEAE (FTN 1: 19-20)

Pittosporum neelgherrense Wight & Arn. Tree. Fairly common in shola forests.

Pittosporum tetraspermum Wight & Arn. Shrub/tree. Occasional in shola forests.

POLYGALACEAE (FTN 1: 20-22)

Polygala arillata Buch. - Ham. ex D. Don. Large erect shrub; fl. yellow in drooping terminal racemes. Occasional in hilly tracts. E

Polygala arvensis Willd. An erect or ascending annual herb; fl. yellow. Common in dry areas.

Polygala elongata Klein ex Willd. Erect herb; fl. yellow on elongate infl. Occasional in open lands and low hills.

Polygala erioptera DC. A diffuse annual herb; fl. rose-coloured. Occasional in open lands.

Polygala javana DC. Perennial herb; fl. rose, pretty. Fairly common in hilly tracts.

Polygala rosmarinifolia Wight & Arn. Suffrutescent annual herb; fl. yellow. Occasional in hilly tracts.

Polygala sibirica L. Perennial herb; fl. blue. Occasional in high altitudes. E

Polygala telephioides Willd. A diffuse herb; fl. greenish. Occasional in open lands.

Polygala wightiana Wall. ex Wight & Arn. An erect or ascending herb. occasional in hilly tracts.

XANTHOPHYLLACEAE (FTN 1: 22)

Xanthophyllum flavescens Roxb. கருங்காலி. Large tree; fl. white; fr. green. Fairly common in hilly forests.

CARYOPHYLLACEAE (FTN 1: 22-24)

Polycarpaea aurea Wight & Arn. Erect herb. Fairly common in rocky areas of higher hills.

Polycarpaea corymbosa (L.) Lam. Erect herb; fls. white. Common in waste places and fields in dry areas.

Polycarpaea spicata Wight & Arn. Erect herb; fls. spicate. Rare in dry areas of the plains.

PORTULACACEAE (FTN 1: 24 - 25)

Portulaca oleracea L. பருப்புக் கீரை. Prostrate herb; fl. yellow. Common in plains. E

Portulaca pilosa L. Perennial succulent herb. Fairly common in dry areas of plains. E

Portulaca quadrifida L. Fleshy prostate weedy herb; fl. yellow. Common in the plains. E

Portulaca lsuffruticosa Wight ex Wight & Arn. An undershrub; Fl. yellow. Occasional in dry areas.

Portulaca wightiana Wall. ex Wight &Arn. Small herb; fl. cream-coloured, solitary. Occasional on rocks.

Talinum portulacifolium (Forsk.) Asch. & Schweinf. (= *T. cuneifolium* (Vahl) Willd. Undershrub, erect; fl. pink; fr. globose. Also cultivated.

Talinum triangulare Willd. பசலைக் கீரை. Perennial, succulent non fibrous, erect shrub. Cultivated as green vegetable. E

ELATINACEAE (FTN 1: 25-26)

Bergia ammannioides Roxb. Slender, wiry tomentose herb; fl. 3-merous purple. Occasional in marshy areas.

HYPERICACEAE (FTN 1: 26-27)

Hypericum mysorense Heyne ex Wight & Arn. Shrub; fl. yellow. Occasional in grasslands of the hills.

GUTTIFERAE (CLUSIACEAE) (FTN 1: 27-29)

Calophyllum apetalum Willd. Tree. Occasional in forests of low elevations.

Calophyllum austroindicum Kosterm. ex Stevens. Tall tree, glabrous. Rather rare in evergreen forests.

Calophyllum inophyllum L. பின்ன கொட்டை. Ornamental tree. Fl.white. Fr. yield an oil; Mostly cultivated; also run wild. E

Calophyllum polyanthum Wall. ex Choisy காட்டு பின்னை. Evergreen tree; bark deeply cracked, yellow. Occasional in hill forests. E

Gareinia cowa Roxb. ex DC. An erect tree. Occasional in low elevations of hills.

Garcinia echinocarpa Thw. Evergreen tree; wood hard, reddish brown. Rather rare in hill forests.

Garcinia gummi - gutta (L.) Robs. கொடுக்கா புளி. Evergreen tree; fr. used in curries. Fairly common in lower shoal forests. E

Garcinia mangostana L. Tree. Cultivated for edible fruits. E

Garcinia morella (Gaertn.) Desr. மக்கி. Tree. Rather rare in lower evergreen forests.

Garcinia papilla Wight (=*G. cambogia* sensu Dunn) p.p. Tree. Rare in shola forests.

Garcinia travancorica Bedd. Evergreen tree, medium - sized. Rare in evergreen forests.

Mesua ferrea L. subsp. **ferrea.** Medium tree in lower hills. E

Mesua ferrea L. Subsp. **pulchella** (Planch. & Triana) Vesque var - **pulchella.** Large evergreen tree. Occasional in hill forests.

Mesua ferrea L. subsp. **pulchella** (Planch. &Triana) Vesque var.

Coromandeliana (Wight) Mahesh. Handsome tree. Fairly common in lower elevations.

Poeciloneuren pauciflorum Bedd. Evergreen large tree; fl. white. Rather rare in hill forests.

THEACEAE (FTN 1: 29-30)

Eurya nitida Korth. Shrub or tree. Occasional in shola forests. E

Gordonia obtusa Wall. ex Wight & Arn. Tall tree; bark grey. Fairly common in drier shola forests.

DIPTEROCARPACEAE (FTN 1: 30-31)

Dipterocarpus indicus Bedd. Lofty tree. Occasional in lower evergreen forests. E

Hopea erosa (Bedd.) van Stooten. Large tree. Rather rare in low elevations.

Hopea glabra Wight & Arn. Large tree. Occasional in hill forests. E

Hopea parviflora Bedd. போங்கு. Large tree. Occasional in hilly forests. E

Hopea ponga (Dennst.) Mabberley இலை போங்கு. Large tree. Occasional in evergreen forests. E

Hopea utlis (Bedd.) Bole. Large tree. Occasional in lower elevations. E

Vateria indica L. வெள்ளை குங்கிலியம். Large tree. Occasional in low evergreen forests. E

ANCISTROCLADACEAE (FTN 1: 31)

Ancistrocladlus heyneanus Wall. ex Graham. Large climbing shrub with hooked branches. Occasional in evergreen forests.

MALVACEAE (FTN 1: 31-37)

Abelmoschus angulosus Wall. ex Wight & Arn. Erect herb or undershrub. Fairly common in hilly regions.

Abelmoschus manihot (L.) Medicus (=*Hebiscus manihot L.)* Undershrub, erect. Fairly common in disturbed areas. E

Abutilon hirtum (Lam.) Sweet வாடா துத்தி Stout undershrub; fl. yellow. Fairly common in wastelands in plains and hills.

Abutilon indicum (L.) Sweet பணியாரத் துத்தி Shrubby; fl. yellow. Comon in open waste places. E

Gossypium arboreum L. பருத்தி Erect shrub, cultivated; fl. yellow, fadding purple.

Capsules splitting by valves; source of cotton; oil from seed. E

Gossypium hirsutum L.பருத்தி Shrub; fl. yellow. Cultivated.

Hibiscus canescens Heyne ex Wight & Arn. Small tree; flowers yellow. Rather rare in dry regions.

Hibiscus cannabinus L. புளிமஞ்ஞி Deccan Hemp. Subshrub; fl. yellow. cultivated. E

Hibiscus lunariifolius Willd. Subshrub; fl. yellow. Occasional in hill forests.

Hibiscus panduriformis Burm. f. Tall undershrub; fls. yellow. Rather rare.

Hibiscus platanifolius (Willd.) Sweet Large shrub; fls. large, handsome. Occasional in dry regions; sometimes cultivated in gardens.

Hibiscus rosa-sinensis L. செம்பருத்தி Erect ornamental shrub; cultivated in gardens. E

Hibiscus surratensis L. Trailing undershrub, prickly. Occasional in the plains. E

Hibiscus tiliaceus L. நீர்பருத்த. ஆத்து பருத்தி Branched tree; fl. yellow. Often planted. E

Hibiscus vitifolius L. Subshrubby; fl. yellow. Frequent in the plains; sometimes cultivated. E

Malavastrum coromandelianum (L.) Garcke Herbs or undershrubs; fl. pale yellow. Common in waste lands in the plains.

Pavonia odorata Willd. பெராமுத்தி Erect herb or undershrub; fl. pink. Common in waste lands and roadsides in the plains.

Pavonia procumbens (Wall. ex Wight & Arn.) Walp. Undershrub; fl. yellow. Weed on roadsides and fallow fields.

Pavonia zeylanica (L.) Cav. மாமத்தி An erect undershrub; fl. pink. Fairly common in plains. E

Sida acuta Burm. f. மலைதாங்கி Subshrubby, erect or ascending; fls. yellow. Common in waste places both in plains and lower hills. E

Sida cordata (Burm.f.) Borssum பாலாம்பாசி Slender prostrate or ascending herb. Common in waste places. E

Sida cordifolia L. நிலதுத்தி Erect undershrub; fl. yellow. Common weed in plains. E

Sida glutinosa Commers ex Cav. Erect undershrub. Common in waste places in plains.

Sida rhombifolia L. கருந்துத்தி Erect or ascending undershrub. Common weed in plains. E

Sida spinosa L. அரிவாள் மனை பூண்டு Hills. Erect undershrub; fl. yellow. Common weed in plains. E

Thespesia lampas (Cav.) Dalz. ex Dalz. & Gibs. Undershrub; fl. yellow. Sparce in forest undergrowth. E

Thespesia populnea (L.) Soland. ex Correa. பூவரசு Large tree; fl. yellow, fadding pink. Often planted in the plains and coastal regions. E

Urena lobata L. subsp. **lobata** ஒட்டத்தி Gongo jute. Subshrubby; fl. rose. Common weed in waste lands and roadsides.

Adansonia digitata L. ஆனைப்புளி Large tree. Planted.

Bombax ceiba L. இலவு Silk / Red Cotton tree. Large tree; fl. red showy; wood soft, fibrous. Frequent in hill forests. E

Ceiba pentandra (L.) Gaerth. இலவம் Kapok Tree. Tall tree. Fl. white. Mostly cultivated. E

Cullenia exarillata Robyns வேலுபிலா Large buttressed tree; fr. globose, very spinous. Occasional in evergreen forests.

STERCULIACEAE (FTN 1: 38 - 42)

Helicteres isora L. வலம்புரி Indian Screw Tree. Shrub/small tree; fl. crmson; fr. twisted right, beaked. Common forest undergrowth. E

Heritiera papilio Bedd. Lofty evergreen tree. Sparse in hilly forests. E

Leptonychia moacurroides Bedd. Shrub/tree; fr. tubercled. Rare in lower forests.

Melhania cannabina Wight ex Mast. Shrubs; leaves velvety above. Rather rare in the plains.

Melochia corchorifolia L. பின்னாக்கு பூண்டு Herbs/undershrubby. Weed of roadsides and waste places.

Pterospermum diversifolium Blume மூனி Medium-sized tree. Scarce in low elevations. E

Pterospermum obtusifolium Wight ex Mast. Tree. Scarce in lower elevations.

Pterospermum rubiginosum Heyne ex Wight & Arn. சிற்றிலை பொலவு Large evergreen tree. Occasional in shola forests. E

Pterospermum xylocarpum (Gaertn.) Sant. & Wagh பொலவு Tree. fl. white, fadding yellow; fr. woody. E

Pterigota alata (Roxb.) R. Br. ஆனைதொண்டி Evergreen tree; bark ash coloured. Occasional in hill forests.

Sterculia balanghas L. Medium-sized tree; bark white. Scarce in evergreen forests. E

Sterculia foetida L. பீநாரி Deciduous tree; fl. red; fr. follicles, boat-shaped, woody. Occasional in lower hill forests. E

Sterculia guttata Roxb. ex DC. காவளம் Medium-sized tree; fl. red; fr. woody, obovoid, bright red, villous without. Occasional in evergreen forests. E

Waltheria indica L. செம்புடு Erect branched herb; fl. yellow. Common in along roadsides and forest undergrowth. E

TILIACEAE (FTN 1: 42 - 46)

Corchorus aestuans L. Annual herb; fls. yellow. Common in pastures and along ditches.

Corchorus olitorius L. சணப்பை Jute. Annual herb; capsule glabrous, elongate. Perhaps run wild. E

Corchorus tridens L. Annual herb. Common along roadsides in the plains.

Corchorus trilocularis L. Erect herb. Common weed on roadsides and fields in the plains.

Grewia barberi Drumm. Shrub. Rare in lower hills.

Grewia flavescens Juss. Shrub/small tree. Frequent in lower hilly forests.

Grewia hirsuta Vahl தவடு Undershrubs. Common in forest undergrowth.

Grewia lanceaefolia Roxb. Shrub. Not common in hilly forests.

Grewia oppositifolia Buch.--Ham. ex Roxb. Shrub; leaves woody beneath. Fairly common in dry forests.

Grewia rothii DC. Shrub. Rare in lower hills.

Grewia tiliaefolia Vahl உண்ணு Medium-sized tree. Fairly common in lower forests. E

Grewia umbellifera Bedd. Shrub. Fairly common in moist deciduous forests.

Grewia villosa Willd. Shrub; leaves 5-ribbed, velvetty. Fairly common in dry forests.

Triumfetta pentandra A.Rich. Annual herb; faint bristle ciliate on one side. Rather rare in dry areas and waste lands.

Triumfetta pilosa Roth perennial, bristly herb. Fairly common in waste lands and lower hills.

Triumfetta rhomboidea Jacq. ஆடைஒட்டி Herbs, suffruticose. Common in the plains.

Triumfetta rotundifolia Lam. Herb. Common along roadsides and wet lands.

ELAEOCARPACEAE (FTN 1: 46-47)

Elaeocarpus munronii (Wight) Mast. நாரி பிச்சி Large tree; fr. olive green. Fairly common in low evergreen forests.

Elaeocarpus serratus L. உனாங்காரை, உத்ராட்சம் Evergreen tree; fls. white in simple racemes. Fairly common in evergreen forests. E

Elaeocarpus tectorius (Lour.) Poir. காட்டு காரை Large tree. Rare in evergreen forests.

Elaeocarpus tuberculatus Roxb. ருத்ராட்சம் Tree; fl. white; fr. ovoid, smooth, compressed tubercled. Occasional along river banks in evergreen forests. E

LINACEAE (FTN 1: 47)

Hugonia mystax L. மோதிரக் கன்னி Rambling/climbing shrub; branchlets with paired spiral hooks; fl. yellow, turning white; ripe fr. red. Fairly common in dry forests. E

ERYTHROXYLACEAE (FTN 1: 47-48)

Erythroxylum monogynum Roxb. தேவதாரு Shrub/tree; fl. white; ripe fr. red, edible. Fairly common in dry evergreen forests. E

Erythroxylum moonii Hochr. Small tree. Rare in outskirts of evergreen forests.

MALPIGIACEAE (FTN 1: 48-49)

Hiptage benghalensis (L.) Kurz (= *H. madablota* Gaertn.) மாதவிக்கொடி Huge climbing shrub; fl. white with yellow and pink patches; fr. winged. Fairly common inm deciduous forests. E

ZYGOPHYLLACEAE (FTN 1: 48-49)

Tribulus terrestris L. நெருஞ்சி Prostrate herb; fl. yellow; fr. spiny. Common in waste land and foothills.

OXALIDACEAE (FTN 1: 50-51)

Biophytum nudum (Arn.) Wight Annual herb. Rather rare in moist deciduous forests and in cleared forest areas.

Biophytum reinwardtii (Arn.) Wight Herb; fls. Yellow. Rare in hill forests.

Biophytum sensitivum (L.) DC. var. **sensitivum** + Hills, fallow ground. V.Common. Herb. Fl. yellow/brick-red.

Biophytum sensitivum (L.) DC. var. **candolleanum** (Wight) Edgew. & Hook.f. Robust herb; fls. yellow. Occasional in shady places along roadsides in the hills.

Oxalis corymbosa DC. Annual herb; fls. violet. Occasional in disturbed forest areas.

Oxalis corniculata L. Herb; fl. yellow. Common along hills in wet areas.

AVERRHOACEAE (FTN 1: 51)

Averrhoa bilimbi L. புளிச்சக்காய் Bilimbi. Small tree; leaflets 5 - 7 pairs; fl. cauliflorus. Cultivated for fruits used in curries. E

Averrhoa carambola L. தாமரத்தக்காய் Carambola. Small tree; leaflets 4-5 pairs. Cultivated for fruits used in curries. E

BALSAMINACEAE (FTN 1: 52-57)

Impatiens balsamina L. Annual herb; fl. rose. Wild as well as cultivated in gardens. E

Impatiens cordata Wight Annual herb; fls. lilac with a purple centre. Occasional in evergreen forests.

Impatiens disotis Hook.f. Erect herb; fl. white. Occasional on grassy slopes.

Impatiens grandis Heyne ஆண்மயக்கி Shrub; fl white/mauve. Occasional in dense forest ravines.

Impatiens hensloviana Arn. Undershrub; fls. large, white. Fairly common along banks of rivers & streams in sholas.

Impatiens maculata Wight Hills. Banks of rivers & streams. Tall herb; fl. in axillary racemes. Occasional along banks of rivers and streams at higher elevations.

Impatiens travancorica Bedd. Small suculent herb; fl. small, white streaked with red, inumbels. Threatened species, rare in rocky slopes.

Impatiens uncinata Wight Annual herb; fls. pale red. Occasional along streams and marshes in higher elevations.

RUTACEAE (FTN 1: 57 - 63)

Acronychia pedunculata (L.) Miq. முட்டநாரி Small tree; fl. white, fragrant. Occasional in moist deciduous forests.

Aegle marmelos (L.) Correa வில்வம் Beal Tree. Spinescent tree; fl. white, fr, with woody rind. Commonly cultivated. E

Atalantia monophylla (L.) Correa காட்டு எலுமிச்சை Armed tree; fl. cream, clustered, fragrant; ripe fr. orange. Fairly common in dry forests.

Atalantia racemosa Wight & Arn. காட்டு நாரகம் Thorny tree, fl. cream-coloured, fragrant. Occasional in evergreen forests.

Atalantia Wightii Tanaka Erect, spinescent shrub; fls. white in axillary racemes. Occasional in evergreen forests.

Citrus limetta Risso கொழுமிச்சை Sweet lime. Tree, cultivated for fruits in hills.E

Citrus limon (L.) Burm. f. மலை எலுமிச்சை Small tree, cultivated for fruits. E

Citrus medica L. Citron. Shrub/tree; fl. white. (GIMP: 68) Occasional in thickets along streams.

Citrus pennivesiculata (Lush.) Tanaka கணபதி நாரத்தை Tree cultivated in plains.E

Clausena dentata (Willd.) M. Roem. *(C. willdenovii* Wight & Arn.) Shrub/tree, aromatic; fl. white; ripe fr. red, edible. Common in foothills.

Clausena heptaphylla (Roxb.) Wight & Arn. Shrub/small tree; fls. greenish white. Frequent in the undergrowth of evergreen and semievergreen forests.

Euodia lunu-ankenda (Gaertn.) Merr. var. **lunu-ankenda** Tree; fl. white; seeds red. Occasional in low evergreen forests.

Euodia lunu-ankenda (Gaertn.) Merr. var. **tirunelvelica** Henry & Chandr. Tree with small leaves. Rare in semievergreen forests.

Glycosmis angustifolia Lindl. ex Wight & Arn. Shrub; fl. white. Rare in moist forests.

Glycosmis cymosa (Kurz) Narayanaswami Shrub/small tree; fls. white in shoot panicles. Occasional in evergreen forests.

Glycosmis mauritiana (Lam.) Tanaka Erect shrub, aromatic; fl. white; ripe fr. orange. Fairly common undergrowth in evergreen forests.

Glycosmis pentaphylla (Retz.) DC. (=*G. Cochinchinensis* sensu Gamble) குலபன்னை Shrub/tree; fls. white in axillary panicles. Common in the plains and lower ghats.

Murraya koenigii (L.) Spreng. கறிவேப்பிலை Curry leaf tree. Shrub/small tree; aromatic; fl. cream-coloured; fr. red. ripe black. Cultivated for leaves. E

Murraya paniculata (L.) Jack Shrub/tree; fl. white or pale yellow. Frequent in low evergreen forests.

Naringi crenulata (Roxb.) Nicolson Thorny tree; fl. white. Occasional in dry forests.

Paramignya armata (Thw.) Oliver Straggling shrub with hooked spines; fls. rather large. Occasional in moist deciduous forests.

Pleiospermium alatum (Wall. ex Wight & Arn.) Swingle (=*Limonia alata* Wall. ex Wight & Arn.) Armed tree; fl. fragrant, cream-coloured; fr. globose. Frequent in foothills.

Toddalia asiatica (L.) Lam. Prickly climber; fl. cream-coloured; mature fr. orange to red. Common in foothills.

Zanthoxylum ovalifolium Wight Scandent shrub; fls. white in slender panicles. Occasional in hill forests.

Z.tetraspermum Wight-Arn. Woody climber in hill forests.

SIMAROUBACEAE (FTN 1: 63)

Ailanthus excelsa Roxb. பெருப்பி Beautiful tree in plains; fl. cream-coloured; fr. winged. Often planted.

OCHNACEAE (FTN 1: 63-65)

Gomphia serrata (Gaertn.) Kanis ராம்ன்சி Shrub/tree; leaves shining. Occasional inhilly tracts.

Ochna lanceolata Spreng. (=*O. Wightiana* Wall. ex Wight & Arn.) (=*O. heyneana* Wight & Arn.) சிலும்பி Small tree; fl. yellow. Occasional in hills. E

Ochna obtusata DC. (=*O. squarrosa* auct. non L.) பாஞ்சரம் Small tree; bark brown; fl. showy, yellow. Occasional up to 1000 m. Cultivated in gardens. E

BURSERACEAE (FTN 1: 64-65)

Canarium strictum Roxb. கருப்பு குங்கிலியம் Lofty tree; fls. bright yellow in panicles. Occasional in evergreen forests. E

Commiphora wightiana (Commiphora berryi (Arn.) **Engler)** Armed shrub/tree, branchlets ending in sharp spines. Frequent in dry forests and plains.

Commiphora caudata (Wight & Arn.) **Engler** கிலுவை Tree(unarmed); bark papery. Fl.cream-coloured. Occasional in dry forests.

Commiphora pubescens (Wight & Arn.) **Engler** Tree; leaflets pubescent. Rare in deciduous forests.

MELIACEAE (FTN 1: 65-69)

Aglaia barberi Gamble Small tree. Rare in hill forests.

Aglaia elaeagnoidea (Juss.) Benth. and its varieties Tree. Occasional in hill forests.

Aglaia simplicifolia (Bedd.) Harms (= *Beddomea simplicifolia* Bedd.) Tree; fls. in axillary panicles. Occasional inhill forests.

Aphanamixis polystachya (Wall.) Parker (=*Amoora rohituka* (Roxb.) Wight & Arn.) மேலம்புலவம் Medium evergreen tree; fl. pale yellow. Occasional in evergreen forests.

Azadirachta indica A. Juss. வேம்பு Neem, Deciduous tree; fl. white, fr. green, mature yellow. A useful tree, fairly common in plains and lower elevations. E

Chuckrasia tabularis A.Juss. அகலை Beautiful tree; bark reddish brown; fl. cream-coloured, fragrant; fr. woody, timber valuable. Occasional in low evergreen forests. E

Cipadessa baccifera (Roth) **Miq.** புளிப்பம் செடி Hills. Common. Shrub/small tree; fl. white; mature fr. red. Occasional in lower hills.

Melia dubia Cav. (= *M. Composita* Willd.) மலை வேம்பு Tree, deciduous; fl. white; fr. globose. Occasional in lower hills, sometimes planted.

Reinwardtiodendron anamalayanum (Bedd.) Saldanha (=*Lansium anamalayanum* Bedd.) சாந்தனருவி Tree; fl. white. Occasional in evergreen forests. E

Toona ciliata M.Roem. (=*Cedrela toona* Roxb ex Rottl. & Willd) Indian Mahogany Deciduous tree; M.white. fr oblong. Fairly common in deciduous forests.

Trichillia connaroides (Wight & Arn.) Bentvelzen (= *T. trijuga* Vahl) காரை, காரை பிலாஞ்சி Tree; fl. white, small fragrant. Occasional in evergreen forests.

Walsura trifolia (A. Juss.) Harms (= *W. piscida* Roxb.) வல்சூரா Small tree; fl. greenish yellow. Rather rare in lower hills.

FLINDERSIACEAE (FTN 1: 69)

Chloroxylon swietenia DC. புருச மரம் Medium-sized tree. Occasional in dry deciduous forest.

DICHAPETALACEAE (FTN 1: 69-70)

Dichapetalum gelonioides (Roxb.) Engler Small tree; fls. white in axillary cymes; drupes obcordate, grey-tomentose. Occasional in low evergreen forests. E

OLACACEAE (FTN 1: 70)

Olax wightiana Wall. ex **Wight & Arn.** var. **wightiana** Scandent shrub/small tree, unarmed. Occasional in lower hills.

Olax wightiana Wall. ex Wight & Arn. var. **nigrescens** Gamble Scandent shrub; branmchlets lenticeled. Occasional in lower hills.

OPILIACCEAE (FTN 1: 70)

Canjera rheedii Gmel. Hills. Climbing shrub; fl. whitish; mature fr. red/orange. Fairly common in dry lower hills.

Opilia amentacea Roxb. Weak climbing shrub; fl. greenish yellow; ripe fr. yellow/ red. Occasional in low dry hills.

ICACINACEAE (FTN 1: 70-71)

Apodytes dimidiata E. Meyer ex Arn. Medium-sized tree; drupe ovoid, compressed. Fairly common in semievergreen forests.

Nothopodytes nimmoniana (Graham) Mabberley (= *Mappia foetida* (Wight) Miers அரலி Tree; fls greenish white, foetid. Fairly common in evergreen forests along streams. E

Sarcostigma kleinii Wight & Arn. ஓடல், பீ வென்ன Climbing shrub; fls. in long pendulous peduncles.Occasional in lower hills. E

ERYTHROPALACEAE (FTN 1: 71)

Erythropalum populifolium (Arn.) Mast. Climbing shrub; fls. yellow. Occasional in evergreen forests.

CELASTRACEAE (FTN 1: 72-76)

Cassine glauca (Rottb.) Kuntze கருவாலி Evergreen shade tree; fl. green; fr. oblong. Fairly common in deciduous forests.

Celastrus paniculatus Willd. வல்லுரை Climber; fl. green; fr. ellipsoid, ripe orange; seeds red. Fairly common in deciduous forests.

Euonymus dichotomus Heyne ex Roxb. ஒயினி Shrubs or trees; fls. pinkish green in dichasial cymes. Occasional in evergreen forests.

Maytenus emarginata (Willd.) Ding Hou (= *Gymnosporia emarginata* (willd.) Thw.) Thorny shrub; fl. white, fragrant; fr. obovoid, aril fleshy. Fairly common in dry open forests.

Maytenus wallichiana (Wight & Arn.) Raju & Babu (*Gymnosporia wallichiana* (Wight & Arn.) Spreng. Thorny shrub. Fairly common in scrubs.

Pleurostylia opposita (Wall.) Alston (=*P. wightii* Wight & Arn.) சிறுபிவரி Tree; fls. minute. Occasional in dry evergreen forests. E

RHAMNACEAE (FTN 1: 76-78)

Ventilago madraspatana Gaertn. வேம்படம் Climber; fl. yellow, fragrant; fr. winged samara. Occasional in deciduous and semievergreen forests. E

Zizypus glabrata Heyne ex Roth (= *Z. trinervia* Roxb.) காருகாயா Unarmed tree; ripe fr. orange. Occasional in dry areas of hills. E

Zizypus mauritiana Lam. (= *Z. jujuba* (L.) Gaertn.) இலந்தை Thorny tree. Lvs rusty below; fls. greenish yellow. Fairly common in dry deciduous forests and foot hills. E

Zizypus nummularia (Burm.f.) Wight & Arn. காரு கொடி Small straggling shrub with geneculate branches near base; fls. small, greenish yellow. Fairly common in dry scrub forests. E

Z. oenoplia (L.) Mill. சொரை முள்ளு Straggling shrub; fls. greenish yellow. Fairly common in dry forests as well as in open bushy areas.

Z. rugosa Lam. காட்டு இலந்தை Hills. Common. Thorny climber or scandent shrub; fls. pale yellow. Occasional in deciduous forests and low grasslands. E

Z. xylopyrus (Retz.) Willd. கொட்டை Large straggling shrub or small tree; fls. pale yellow. Occasional in dry deciduous forests. E

VITACEAE (FTN 1: 78-82)

Ampelocissus arnottiana Planch. Climbing shrub with tendrils; stem hollow; fls. brownish. Rare and endemic to SW Ghats - mostly at low elevations.

Ampelocissus latifolia (Roxb.) Planch. Climbing shrub with tendrils on the peduncle. Occasional in hill forests. E

Cayratia pedata (Lam.) Juss. ex Gagnep. Climbing shrub; fl. greenish, ripe fr. red. Fairly common in hilly tracts.

Cissus glauca Roxb. Stout shrub with forked tendrils; fls. greenish in leaf-opposed cymes. Occasional in foothills.

Cissus heyneana (Wall. ex Lawson) Planch. Stout climber; fl. green; fr. fleshy. Rare in low elevations.

Cissus pallida (Wight & Arn.) Planch. Erect shrub; fl. red tinged; fr. fleshy. Occasional in dry forests.

E

C. quadrangularis L. Rambling shrub; fl. greenish-red; fr. red. Fairly common in foot hills; also cultivated.

Cyphostemma setosum (Roxb.) **Alston**(=*Cissus setosa* Roxb.) Scandent fleshy herb; fl. green, fr. red. Occasional in dry areas. E

Puria trilobata (Lam.) N.C. Nair (=*cissus trilobata* Lam.) Climbing shrub; fls. white. Common inhilly slopes and foothills.

Tetrastigma lanceolarium (Roxb.) Planch. Large climbing shrub; fl. green; fr. globose. Occasional in slopes of lower hills.

LEEACEAE (FTN 1: 82-83)

Leea indica (Burm.f.) Merr. ஒட்ட நாளி Large shrub, fl.green, fr. globose. Fairly common in lower hills and plains. E

SAPINDACEAE (FTN 1: 83-85)

Allophylus serratus (Roxb.) Kurz அமலை Shrub/tree; fl. y"ellow; fr. red/orange. Frequent in evergreen forests.

Cardiospermum halicacabum L. மொடக்கத்தான் கொடி Climbing herb with tendrils; fl. white; fr. pyriform, inflated, winged at angles. Frequent in lower hills and waste lands in plains.

Dodonaea viscosa (L.) Jacq. விரலி Gregarious shrub/tree; fr. 2-4 valved, valve broadly winged. Frequent in shola forests. E

Filicium decipiens (Wight & Arn.) Thw. காட்டு பூவரசு Handsome tree with fern-like leaves; fl. green; fr. purple. Occasional in hill forests; also in dry localities. E

Lepisanthes tetraphylla (Vahl) Radlk. நிகொட்டா Tree; fl. cauliflorus, foetid; fr. rusty. Occasional in dry evergreen forests. E

Sapindus emarginatus Vahl பொங்கன் Soap nut. Tree; fl. yellow; fr. rusty, lobed. Occasional in dry lower hills. E

Sapindus laurifolia Vahl. மணிபொங்கு Small tree. Occasional in evergreen and open forests at low elevations. E

Schleichera oleosa (Lour.) Oken பூவன் Deciduous tree; young leaves red; fl. pendulous; fr, fleshy; aril edible. Fairly common in lower hills. E

SABIACEAE (FTN 1: 86)

Meliosma simplicifolia (Roxb.) Walp. செம்பாவு Tree; fls. white in branched panicles. Fairly common in shola forests.

ANACARDIACEAE (FTN 1: 87-89)

Anacardium occidentale (L.) முந்திரி Tree; fls. yellowish white. Extensively cultivated for nuts. E

Buchanania axillaris (Desr.) Ramam. (=*B. angustifolia* Roxb.) முந்தமா Tree; fl. green; fr. oblique, ovoid, compressed. Fairly common in dry forests. E

B. lanzan Spreng. முடைமா Tree; fls. greenish white; fr. black. Frequent in moist deciduous forests. E

Gluta travancorica Bedd. செங்குறிஞ்சி Large tree; fls. white in terminal panicles; drupes obovate. Occasional in low evergreen forests. E

Holigarna arnottiana Hook.f. கருஞ்சாரை Tree; fls. brownish; fr. oblique-ovoid, glabrous. Frequent along river banks in semievergreen forests.

Lannea coromandelica (Houtt.) Merr. (=*Odina wodier* Roxb.) ஒடையார் Flat-growing tree; inflorescence pendulous; drupe obovoid. Fairly common in deciduous forests; also cultivated. E

Mangifera indica L. மா Mango. Tree, evergreen, spreading; fl. white or cream; fr. green, mature yellow/orange red. Frequent in moist forests along river banks; extensively cultivated for fruits. E

Nothopegia colebrookeana (Wight) Blume Tree; fl. yellow, ripe fr. blue. Frequent in dry evergreen forests.

Rhus mysorensis G. Don முள்வேடத்தி Loc. abund. Thorny shrub; panicles rusty; fr. tinged red. Occasional in dry localities.

Semecarpus travancorica Bedd. காட்டு செங்கொட்டை Large tree; fls. greenish yellow in panicles. Occasional in evergreen forests. E

Spondias pinnata (L.f.) Kurz (=*S.mangifera* Willd., *S. acuminata* Roxb.) காட்டுமா

Deciduous tree; fl. green; fr. ovoid, used for pickles. Fairly common in deciduous forests. E

MORINGACEAE (FTN 1: 90)

Moringa pterygosperma Gaertn. (= *M. oleifera* Lam.) காட்டு முருங்கை Drumstick. Tree, deciduous widely cultivated all over the plains for leaves and fruits. E

CONNARACEAE (FTN 1:90)

Rourea minor (Gaertn.) Alston. Climbing shrub; fls. in axillary panicles. Occasional in semievergreen forests along river banks. E

PAPILIONACEAE (FTN 1: 90-127)

Abrus precatorius L. குண்டுமணி Climber; fl. rose; fr. clustered; seeds red with black eye. Common in scrub forests. E

Aeschynomene aspera L. ஆத்து நெடி Stout shrub; stem used for fishing floats, hats etc., fl. yellow. Common along banks and borders of ponds & lakes. E

Alysicarpusmonilifer (L.) DC. Prostrate herb; fl. red; pods moniliform. Common along the coasts.

A. rugosus (Willd.) DC. var. **rugosus** Herbs; fl. in short racemes. Common in hilly tracks.

Arachis hypogea L. Ground nut. Herb; fl. yellow; pods geocarpic. Cultivated as cash crops. E

Butea monosperma (Lam.) Taub. (=*B.frondosa* Koen. ex Roxb.) பொருசு Tree, conspicuous when flowering; fl. flame coloured. Common in deciduous forests. E

Canavalia gladiata (Jacq.) DC. சிகப்பு தம்பட்டை Climbing shrub; fl. pink; pods edible. Common in deciduous forests.

C.virosa (Roxb.) Wight & Arn. Climber; fl. purple to lilac; pods woody. Common in foothills. E

Cicer arietinum L. சுண்டக்கடலை Herb; fl. yellow; seeds edible. Cultivated. E

Clitoria ternatea L. கார்காகார்டன் Climber; fl. blue or white; pods flat. Common in lower altitudes. Cultivated. E

Crotalaria calycina Schrank. Ann. herb; fl. yellow. Common in exposed areas in hills.

C. heyneana Graham ex Wight & Arn. Low undershrub; fl. blue. Common in plains & hills.

c. juncea L. Sann hemp. Tall herb with striated stem; fl. bright yellow. Scource of green manuare and fibre. Common in hilly areas. E

C.medicaginea Lam. var. **medicaginea** Prostrate herb; lvs 3-foliolate, fl. 2-3 in a raceme. Common in coast and lower altitudes. E

C. mysorensis Roth Erect densely silky herb; fl. in terminal lax racemes. Rare in exposed rocky slopes.

C. nana Burm.f. Prostrate herbs; fl. pale yellow. Not common in midlands and coasts.

C. pallida Dryand. (= *C. striata* DC.) Undershrub; lvs 3-foliolate; fl. yellow with red stripes. Common in grassy slopes. E

C. prostrata Rottl. ex Willd. Perennial herb, densely silky hairy; fl. yellow. Common in deciduous forests. E

C. semperflorens Vent. Herbs or shrub; fl. yellow. Common along the margins of shola and road-cuttings. E

C. umbellata Wight ex Wight & Arn. An erect bushy plant, fls. in umbels. Common in lower altitudes.

C. verrucosa L. Branched herb; fl. blue or white. Frequent in wastelands.

C. walkeri Arn. Low undershrub; fl. yellow. Common in lower altitudes.

C.wightiana Graham ex Wight & Arn. Shrub; lvs golden silky; fl. yellow. Not common in hilly tracks.

Cyamopsis tetragonaloba (L.) Taub. Cluster been. Erect annual herb; fl. blue; pods edible. Cultivated.

Dalbergia acaciifolia Dalz. எரிச்சி, நால்விலாங்கு Woody climbing shrub or small tree; fl. white. Pods 1-2 seeded. Common in dry forests.

D. lanceolaria L.f. எரிச்சி Deciduous tree; fl. pale rose; pods usually 3-seeded. Common in deciduous forests. E

D. latifolia Roxb. கருந்தொவரை Tree; fl. white, fragrant. Not common in semievergreen forests. E

D. paniculata Roxb. பன்னிவாகை Tree; fl. white; fr. 1-seeded. Common in deciduous forests. E

D. sissoides Graham ex Wight & Arn. வெள்கித்தி Tree; large; fl. white. Common in deciduous forests. E

D. sissoo Roxb. சிசுகித்தி Semievergreen tree; fl. cream. Planted along river banks. E

D. sympatahetica Nimmo (= *D. multiflora* Heyne ex Prain) Large climbing shrub, branches twisted; fl. white. Common in lower hills.

Derris brevipes (Benth.) Baker var. **brevipes** Large climbing shrub; fl. red; pods densely silky. Common in hills.

D. scandens (Roxb.) Benth. திருத்தங்கொடி Woody climber; fl. white or pale rose; pods many. Not common in hills. E

Desmodium gangeticum (L.) DC. Undershrub; lvs unifoliolate; fl. white to lilac; pods beaked. Common in lower altitudes. E

D. heterophyllum (Willd.) DC. Much branched undershrub; fl. purple. Common in lower hills.

D. pulchellum (L.) Benth. Shrub; fl. white or yellow. Common in semievergreen forests.

D. triangulare (Retz.) Merr. Shrub, triquetrous branchlets; fl. yellow. Common in moist deciduous forests.

D. triflorum (L.) DC. Undershrub, much branched; fl. violet; pods 4-6 jointed. Common in moist places in plains E

Dolichos trilobus L. (-*D. falcataus* auct. non Klein ex Willd.) Climber; fl. violetish-rose; pods falcate. Common in lower hills. E

Dunbaria ferrugnea Wight & Arn. Woody twiner, slender dawny branchlets; fl. yellow. Common in hills.

Eleiotis monophylla (Burm.f.) DC. (=*E. sororia* DC) Long trailing herb; fl. red; pod boat-shaped, 1-seeded. Common in plains & lower hills.

Flemingia wightiana Graham ex Wight & Arn. Erect shrub with golden silky hairs. Common in dry localities.

Indigofera glandulosa Roxb. ex Willd. Annual herb, lvs. trifoliolate; fl. red; pod 1-2 seeded. Common in wastelands.

Indigofera hirsuta L. Herb; fl. pink, pods pubescent. Common in plains.

I. linnaei Ali (= *I. enneaphylla* L.) Trailing, branched herb; leaflets 4/5 pairs; fl. pink; pod c. 2-seeded. Common in wastelands. E

I. longeracemosa Boiv. ex Baill. Subshrub, leaflets 4-5 pairs, fl. pinkish; pod c. 8-seeded. Common in wastelands.

I. tinctoria L. (=*I. sumatrana Gaertn.)* அவுரி Procumbent herb, hairy; fl. pink. Common in wastelands.

I. trita L. var. **trita** Undershrubs; lf. 3-foliolate; fl. pink; pod c. 6-8 seeded. Common in wastelands. E

I. wightii Graham ex Wight & Arn. Silvery shrub; fl. yellowish-red. Common in lower altitude.

Lablab purpureus (L.) Sweet var. **purpureus** (=*D. lablab* L.) மொச்சை, அவரை Hyacinth bean. Vine; lf. 3-foliolate; fl.pinkish-violet. Vegetable. Cultivated. E

L. purpureus (L.) Sweet var. **lignosus** (Prain) Kumari மொச்சை Erect, bushy, perennial herb; fr. short and broader. Cultivated. E

Millettia rubiginosa Wight & Arn. Woody climber; fl. red, pods with brow pubescent. Rare in evergreen forests.

Mucuna atropurpurea DC. Woody climber; pods 2- seeded. Not common in lower altitudes.

Mucuna pruriens (L.) DC. Vine; lf. 3-foliolate; fl. dark purple; pods s-shaped, c.6-seeded, with stinging hairs. Rare in foothills.

Ormocarpum cochinchinense (Lour.) Merr. (= *O.sennoides (*Willd.) DC. காட்டுமுருங்கை Small shrub; leaflets c. 6 pairs; fl. yellow; pods 1-3-seeded. Not common in scrub forests. E

Vine; lf. 3-foliolate; fl. dark purple; pods s-shaped, c.6-seeded, with stinging hairs. Rare in foothills.

Ormocarpum cochinchinense (Lour.) Merr. (=*O. sennoides* (Willd.) DC.) காட்டு முருங்கை Small shrub; leaflets c. 6pairs; fl. yellow; pods 1-3 seeded. Not common in scrub forests. E

Paracalyx scariosa (Roxb.) Ali (=*Cylista scariosa* Roxb.) Climber; lf. 3-foliolate; fl. yellow; pod 1-seeded. Common in lower altitudes. E

Pongamia pinnata (L.) Pierre (=*P. glabra* Vent.) பொங்க மரம் Locally abundant. Ornamental. Galls on lvs. & infl., leaflets 2-5 pairs; fl. pinkish white; pod woody, 1-2 seeded. Common in lower hills, ornamental. E

Pseudarthria viscida (L.) Wight & Arn. Veined-pubescent climbing shrub; lf. 3-foliolate; fl. rose; pod 4-seeded. Common in exposed areas. E

Pterocarpus marsupium Roxb. வேங்கை Tree, large; leaflets 3 pairs; fl. golden yellow; pods rounded, winged. Common in deciduous forests. E

Rhynchosianummularia DC. கொடி அவரை Annual herb. Common in plains. E

R. rufescens (Willd.) DC. Erect shrub with trailing branches, 1-seeded. Common in lower hills. E

Sesbania bispinosa (Jacq.) W.F.Wight (=*S. aculeata* (Willd.) Poir. Shrub; fl. yellowish brown. Common in moist places and lower hills. E

S. grandiflora (L.) Poir. அகத்தி Tree, prop for betal vine; fl. white/cream, large; pod up to 60 cm, c. 30-seeded. Cultivated. E

S. sesban (L.) Merr. சித்தகத்தி Shrub/small tree; fl. brown-purple; pod up to 30 cm, up to 30-seeded. Cultivated. E

Sophora wightii Baker Small tree; fl. yellow. Not common in hills.

Stylosanthes fruiticosa (Retz.) Alston (=*S. mucronata* Willd.) Shrub, woody; fl. yellow; pod 1-2 seeded. Abundant in scrub forests.

Tephrosia hookeriana Wight & Arn. Shrub; leaflets 1-10 pairs; fl. small on short pedicels & elongated raceme.

T. maxima (L.) Pers. Prostrate herb, leaflets 6-9 pairs; fl. purple; pod c. 15-seeded. Common in wastelands.

T. pulcherrima (Wight ex Baker) Drumm. Undershrub among grass, leaflets up to 5 pairs; fl. pink red; pod up to 11-seeded. Common in hilly tracks.

T. purpurea (L.) Pers. (=*T. hamiltonii* Drumm.) காட்டு கொழிஞ்சி Erect perennial undershrub, leaflets 4-9 pairs; fl. pink purple; pod c. 7-seeded. Common in wastelands & lower hills. E

T. spinosa (L.f.) Pers. முள் கொழிஞ்சி Spreading thorny shrub, leaflets 4-5 pairs; fl. red; pods up to 7-seeded. Common in scrub forests.

T. tinctoria Pers. Procumbent hairy herb, leaflets 7-9 pairs, glaucous; fl. orange to brick-red; pods up to 11-seeded. Not common in hillyareas and plains.

T. villosa (L.) Pers. (*T. hirta* Buch.--Ham.) Gamble Erect hairy herb, leaflets 5-7 pairs, fl. pink; pod up to 8-seeded. Not common in wastelands.

Teramnus labialis (L.f.) Spreng. ssp. **labialis** Climbing herb, leaflets 3; fl. pink; pod up to 10-seeded. Common in plains & lower hills.

Uraria rufescens (DC.) Schind. Straggling shrub; fl. blue. Common in deciduous forests.

Vigna aconitifolia (Jacq.) Marechal (=*Phaseolus aconitifolius* Jacq.) துலுக்க பயறு Prostrate/twining, lvs 3-foliolate. Cultivated for its seeds in dry sandy areas. E

V. grahamiana (Wight & Arn.) Verdc. (=*Phaseolus grahamianus* Wight & Arn.) Slender climber, leaflets deltoid; pot flat, narrow, many seeded. Common in lower hills.

V. mungo (L.) Hepper (=*Phaseolus mungo* L.) உளுந்து Black gram. Erect herb. Cultivated for its seed.` E

V. radiata (L.) Wilczek var. **radiata** (= *Phaseolus radiatus* L.) Green gram. Erect herb. Cultivated as a crop for its seeds. E

V. trilobata (L.) Verdc. (= *Phaseolus trilobatus* (L.) Schreb.) பன்னிபயறு Prostrate/ twiner. Fodder crops, cultivated for its seeds. E

V. unguiculata (L.) Walp. ssp. **unguiculata** (=*Dolichos biflorus* L.) கொள்ளு Herb; seed edible. Cultivated for its seeds. E

V. unguiculata (L.) Walp. ssp. **cylindrica** (L.) Eselt. (= *V.catajang* (Burm.f.) Walp. தட்டபயறு Suberect annual twiner; pods & seeds edible. Cultivated. E

Zornia diphylla (L.) Pers. (= *Z. zeylonensis* Pers.) Herbs, leaflets ovate; fl. yellow. Common in plains.

Z. gibbosa Span. Herb, lvs. lanceolate; fl. yellow. Coastal plant. Common in sandy ares.

CAESALPINIACEAE (FTN 1: 127-133)

Acrocarpus fraxinifolius Wight & Arn. மலைக் கொன்னை Large, lofty, tree, buttresses large; fl. in dense axillary racemes. Common in evergreen forests, often planted.

Bauhinia malabarica Roxb. மந்தாரை Tree; fl. pale yellow. Not common in evergreen forests in lower altitude.

B. purpurea L. மந்தாரை Purple Bauhinia. Tree; fl. rose-pink. Often cultivated in lower hills. E

B. racemosa Lam. கொக்கு மந்தாரை Tree; fl. white; pod twisted, massive. Common in plains & lower hills. E

B. tomentosa L. காஞ்சினி Shrub/tree; fl. yellow, fragrant. Often cultivated. E

Caesalpinia bonduc (L.) Roxb. (= *Caesalpinia crista* L.) Scandent or scrambling prickly shrub; fl. yellow; pods rounded, spiny. Common in wastelands and coasts. E

C. pulcherrima (L.) Sw. மயில் கொன்னை Peacock flower. Handsome shrub; fl. orange/yellow. Cultivated. E

Cassia absus L. முலைபால்லிரை Herb, lvs. 2 pairs; fl. scarlet; pod 6-seeded. Not common in hills.

C. alata L. Shrub/small tree; fl. yellow; pods many seeded. Cult. in gardens, run wild. E

C. auriculata L. ஆவாரம் Tall shrub; fl. bright yellow; pods 6-seeded. Green manure. Source for country soap/tanin. Common in lower hills & plains E

C. fistula L. கொன்னை Indian Laburnum. Tree, planted; fl. yellow, drooping racemes; pods many seeded. Common in lower hills, often cultivated in gardens. E

C. hirsuta L. Trop. American. Diffuse undershrub; fl. yellow; pods hairy. Common in plains, often planted.

C. mimosoides L. Diffuse perennial herb; fl. yellow; pods up to 15-seeded. Rare in moist deciduous forests. E

C. nigricans Vahl சுரையான்வணங்கி, தொழுகன்னி Shrub; fl. yellowish red. Common in coastal areas.

C. occidentalis L. பாய் அவரை Undershrub, foetid; fl. yellow; pods 20-25 seeded. Common in wastelands. E

C. roxburghii DC. (= *C. marginata* Roxb.) வாகை Red Cassia. Tree; fl. scarlet red; pods many-seeded. Common in deciduous forests.

C. senna L. var. senna (= *C. angustifolia* Vahl) திருநெல்வேலி சென்னா Shrub; fl. yellow; pods 8-seeded. Medicinal. Common in plains. E

C. siamea Lam. மஞ்சக்கொன்னை Tree; fl. yellow; pods 20-30 seeded. Common in lower hills often planted.

C. tora L. தகரை Herb, leaflets 3 pairs, fl. golden yellow; pods long, curved, 20-30 seeded. Common in moist places in plains. E

Delonix regia (Hook.) Raf. Gul Mohur. Tree; fl. scarlet, showy; pods woody. Cultivated for ornamental.

Parkinsonia aculeata L. Spiny shrub; fl. yellow; pod 6-seeded. Common in low land areas.

Peltophorum pterocarpum (DC.) Baker K. Heyne இவல்வாகை Tree; fl. yellow, showy; pod copper colour, flat. Planted for ornamental.

Pterolobium hexapetalum (Roth) Sant. & Wagh (= *P. indicum* A.Rich.) கரிந்து Armed straggling shrub; fl. white; pod red, winged. Common in foot hills. E

Tamarindus indica L. புளி Tamarind. Tree; fl. yellow; pod oblong, 3-8 seeded, used for cooling. Planted, avenue & revenue tree. E

MIMOSACEAE (FTN 1: 133-140)

Acacia chundra (Roxb. ex Rottl.) Willd. கருங்காலி Tree; fl. white; pod 6-seeded. Common in food hills.

A. decurrens (Wendl.) Willd. சீமை வேலம்பட்டை Tree, branches angled; fl. pale yellow. Common in lower hills.

A. eburnea (L.f.) Willd. சில்லோடை Trees; fl.yellow; pod 2 ;5 seeded. Common in scrub foreast.

A. farnesiana (L.) Willd. வேதயாலா Trop. American. Thorny tree/shrub; fl.bright yellow, fragrant; pod 20-many seeded. Common in food hills. E

A. ferruginea DC. வெல்வேலம் Tree; fl. yellow; pod 6-seeded. Social forest tree, scrub forests and plains.

A. horrida (L.f.) Willd. (=*A. latronum* (L.f.) Willd. ஆனைமுள்ளு Shrub/small tree with hollow white spine; fl. cream. fragrant; pod 10-seeded. Common in shrub forests.

A. leucophloea (Roxb.) Willd. வெல் வேலம் Tree, white bark; fl. cream; pod 10-seeded. Common in lower hills.

A. nilotica (L.) Willd. ex. Del. ssp. indica (Benth.) Brenan (= *A. arabica* (Lam.) Willd.) கருவேலம் Medium-sized thorny tree; fl. yellow; pod 13-seeded. Wood valuable. Good resin from pods & trunks used in social forestry. E

A. pennata (L.) Willd. Scandent shrub; fl. cream; pod 10-seeded. Common in foot hills. E

A. plani frons Wight & Arn. கொடைவேலம் Umbrella tree; fl. cream. Often cultivated. Common in wastelands. E

A. polyacantha Willd. (= *A. suma* (Roxb.) Buch.-Ham. ex J.Voigt Tree; fl. white; pod 5-8 seeded. Common in foot hills. E

A. sinuata (Lour.) Murr. (=*A. concinna* (Willd.) DC.) சீவக்காய் Prickly. stout. climbing shrub; fl. cream; pods substitute for soap. Common in foot hills. E

Albizia amara (Roxb.) Boivin. உஞ்சால் Tree; fl. cream; pod many seeded. Common in deciduous forests. E

A. lebbeck (L.) Willd. வாகை Tree; fl. green; pod 10 - seeded. flat. Common in foot hills and plains. Oftlen planted. E

Albizia odoratissima (L.f.) Benth. var. odoratissima கருவாகை Large trees; fl. cream, fragrant; 10-12 seeded. Widely planted. E

Albizia procera (Roxb.) Benth. கொண்டவாகை Tree; fl. yellowish white. Rare in deciduous forests. E

Dichrostachya cinerea (L.) Wight & Arn. வேததழை Thorny tree; fl. yellow above (bi-sexual). pink below (male.) Pod twisted, 4-6 seeded. Common in scrub forests. E

Entada pursaetha DC. வட்டவள்ளி Gigantic woody climber; fl. small, yellowish white. Pod huge, flat. Rare in evergreen forests.

Mimosa pudica L. தொட்டாசிணுங்கி Prostrate prickly undershrub. Lvs sensitive - fl. heads pink-pod 2-5 seeded. Common in exposed areas in forests.

Neptunia oleracea Lour. சிண்டைக்கீரை Aquatic annual herb; fl. Yellow; pod 6-seeded. Not common in ponds and lakes. E

Pithecellopium dulce (Roxb.) Benth. கொடுக்காப்புளி Trop. American. Thorny trees; fl. cream; pod flat, coiled, many seeded, aril of seed white/pink, edible. Common in wastelands. E

Prosopis cineraria (L.) Druce சீமைமுள்ளு Medium thorny tree; fl. cream; fr.flat, fodder. Common in wastelands. E

Samanea saman (Jacq.) Merr. தூங்குமூஞ்சி Rain tree. Tree; fl. pink; pod woody. Planted for avenue. E

ROSACEAE (FTN 1 : 140 - 144)

Prunus ceylanica (Wight) Miq. (= *P. acuminata* Michx., *P. wightianum* Bl. ex C. Muell., *T.gardneri* Hook. f., *P.sisparense* Gamble) பலாங்கச்சி Tree; fls. white, fragrant in racemes. Occasional in lower hills along river banks. E

Rubus ellipticus Smith Large straggling shrub, prickly. Fairly common in open forest areas at higher elevations. Fr edible. E

R. niveus Thunb. Scandent shrub; leaves white beneath. Fairly common on shola margins and open forests at high elevations. E

CRASSULACEAE (FTN 1: 145-146)

Kalanchoe pinnata (Lam.) Pers. (= *Bryophyllum pinnatum* (Lam.) Oken) ருனாகள்ளி Succulent erect herb or undershrub; fl. green. Fairly common in most rocky regions of lower shola forests. E

DROSERACEAE (FTN 1: 146)

Drosera indica L. Straggling leafy herb, up to 30 cm tall; insectivorous; fls white or pinkish. Frequent in marshy areas both plains and hills. E

D. peltata Sm. Erect herb, 30 cm tall. Frequent in moist rocky areas of the hills.

HALORAGACEAE (FTN 1: 146-147)

Myriophyllum oliganthum (Wight & Arn.) F.v. Muell. (= *M. intermedium auct.* non DC.) Herb; fl rose. Drupe 4-seeded. Occasional in wet places and ponds.

Laurembergia coccinea (Blume) Kan. var. **zeylanica** (Arn. ex Clarke) Meyden (= *Laurenbergia agastyamalayana* Henry) Decumbent herb; fls pinkish white. Occasional in grassy swards.

RHIZOPHORACEAE (FTN 1: 147-148)

Cassipourea ceylanica (Gardn.) Alston (= *Weihea zeylanica* Gardn.) காணும் Tree; fl. whitish. Occasional on rocky areas along river banks.

COMBRETACEAE (FTN 1: 148-150)

Anogeissus latifolia (DC.) Wall. ex Beddome வெள்ள நாகை Large tree; bark smooth, grey; fl. yellow; fr. clustered, 2-winged. Fairly common in deciduous forests. E

Calycopteris floribunda Lam. மினார்கொடி Straggler; fl. cream-coloured, dense. Occasional in deciduous forests. E

Combretum albidum G. Don வெரகை Large climbing shrub; fl. yellow; fr. red (young) brown (old), winged. Fairly common in deciduous forests.

Quisqualis indica L. ரங்கூன் மல்லி Rangoon creeper. Thorny straggling herb; fl. pink, pendulous. Most cultivated for ornament; also run wild in cleared forest areas. E

Terminalia arjuna (DC.) Wight & Arn. வெள்ளை மருது Large deciduous tree; bark smooth; grey; fr. winged; wood for agri. implements. Fairly common in deciduous forests. E

T. bellerica (Gaertn.) Roxb. தாணி Large deciduous tree; bark grey, fissued; young lvs. red. Fr. ridged. Useful in tanning and dyeing. Common in deciduous forests at lower elevations. E

T. catappa L. வாதம் Large deciduous tree; fr. compressed, 2-ridged. Mostly cultivated for ornament and fruit. E

T. chebula Retz. கடுக்காய் Large deciduous tree; bark dark brown; fr. rich in tanins & dyes. Common in deciduous forests at lower elevations. E

T. coriacea (Roxb.) Wight & Arn. சடகம் Large tree; bark grey. Rare in lower hills. E

T. paniculata Roxb. வெம்மருது Large tree; fr. winged. Common in deciduous forests.

MYRTACEAE (FTN 1: 150-158)

Eucalyptus teriticornis Smith Red Gum. Extensively planted tree in plains for fuel & timber. E

Eugenia mabaeoides Wight Shrub/small tree, much-branched; fls. white. Rare in hill tops.

E. singampattiana Bedd. Small tree; fl. whitish. Rare in moist deciduous forests.

Psidium guajava L. கொய்யா Tree; fl. white fragrant, mature yellow. Mostly cultivated for fruits. E

Syzygium aromaticum (L.) Merr. & Perry. கிராம்பு Pyramidal or conical evergreen tree; fl. buds aromatic. Cultivated in lower hills. E

S. caryophyllatum (L.) Alston Small tree; fls. white. Occasional near streams in moist forests.

Syzygium courtallense *(Gamble)* Alston

S. cumini (L.) Skeels நாவல் Medium-sized tree; fr. green, mature bluish-black, edible. Mostly cultivated in plains.

S. gardneri Thw. நீர்நாவல் Tree; bark smooth grey; fls. white in panicles. Occasional in evergreen forests. E

S. hemisphericum (Wight) Alston வெள்ளை நாவல் Medium-sized tree; bark yellowish grey; fls. whitish. Very rare in evergreen forests.

S. jambos (L.) Alston பெருநாவல் Small tree; fls. greenish white. Occasional in moist deciduous forests; often planted in gardens. E

S. laetum (Buch.- Ham.) Gandhi Tree, evergreen; fls. whitish. Occasional in low evergreen forests.

S. lanceolatum (Lam.) Wight & Arn. (= *S. wightianum* Wall. ex Wight & Arn.) Medium-sized tree; bark grey. Occasional in moist forests.

S. mundagam (Bourd.) Chithra (= *Eugenia mundagam* Bourd.) காட்டு அசம்பு Tree; fls. white, fragrant. Occasional in evergreen forests.

S. munronii (Wight) Chandr. (= *Jambosa munronii* (Wight) Walp. Medium-sized tree; fls. large, white. Occasional in evergreen forests.

S. zeylanicum (L.) DC. var. ellipticum Henry, Chandrabose & Nair Shrubs; fls. white. Rare in open evergreen forests.

LECYTHIDACEAE (FTN 1: 158)

Couroupita guianensis Aubl. நாகலிங்கம் Tree; fl. on trunk and branches, white with rose tinge, fragrant. Cultivated.

BARRINGTONIACEAE (FTN 1: 158-159)

Careya arborea Roxb. அய்மா Deciduous tree; fls. whitish. Fairly common in deciduous forests; conspicuous in grassy places. E

MELASTOMATACEAE (FTN 1: 190-)

Medinella beddomei Clarke Epiphytic fleshy climbing shrub, covering the trunks and branches of tree; fls. pale rose. Occasional in dense evergreen forests.

Melastoma malabathricum L. நாக்கு கருப்பன் Shrub; fl. showy, rose. Occasional in wet places and along banks of streams in lower hills. E

Memecylon edule Roxb. காயா Shrub/tree; fl. blue, clustered, showy. Fr. ripe blue, edible. E

M. gracile Bedd. உச்சிக்காக்கா Undershrub or shrub; branches zig-zag; fls. pale blue. Rare in the undergrowth of evergreen forests.

Memecylon subramanii Henry Hills. Large shrub/tree, erect; leaves large; peduncle long; fl. in cymes. Occasional in hilly regions.

M. umbellatum Burm. f. குரிகாயா + Hills. Large shrub; fl. blue, in small subsessile clusters; fr. ripe yellow. Fairly common in dry evergreen forests in lower elevations. E

Osbeckia aspera (L.) Blume var. aspera (= *O. courtallensis* Gamble) காட்டு கதலை Hills. Branched shrub; fls. pink; Frequent in deciduous forests.

O. aspera (L.) Blume var. wightiana (Benth. ex Wight & Arn.) Trimen (= *O. wightiana* Benth. ex Wight & Arn.) Branched shrub. Fairly common in grasslands of the hills.

O. gracilis Bedd. (*O. sublaevis* Cogn.; *O. lineolata* Gamble) Small shrub; leaves yellowish green or dark olive green; fls pinkish. Frequent in moist deciduous forests.

O. zeylanica L.f. Annual herb; fl. rose, pretty. Fairly common in sunny wet often sandy places.

Sonerila brunonis Wight & Arn. Erect woody herb; fls purple in umbellate racemes. Frequent in open evergreen forests.

S. clarkei Cogn. Herb in shady places; fl. pink; fr. dried brown. Occasional in hill forests.

S. kanniyakumariana lithophytic herb; fl. pink. Occasional in hill forests.

S. tinnevelliensis Fischer Erect herb or undershrub; fls. pinkish red. Frequent in open evergreen forests.

S. travancorica Bedd. Perennial herb/undershrub. Fl. pinkish red in racemes. Rather rare in hill tops.

LYTHRACEAE (FTN 1: 165-167)

Ammannia baccifera L. நீர் மேல் நெருப்பு Herb in marshy places; fl. green turning purple; fr. purple. Common weed in wet places. E

A. multiflora Roxb. Erect herb. fl. rose. Occasional in wet places in plains

A. octandra L.f. Herb; fl. brick red. Occasional in coastal areas and on tank borders.

Lagerstroemia microcarpa Wight (= *L. lanceolata* Wall. ex Clarke; *L. thomsonii* Koehne) Deciduous tree; fls. white, fragrant. Occasional in deciduous forests. E

Lawsonia inermis L. மருதாணி Henna. Shrub; fl. pale yellow, fragrant. Leaves a source of Lenna dye. Mostly cultivated as a hedge plant. E

Nesaea brevipes Koehne Erect herb. glabrous, fl. apetalous. Occasional in wet places in plains.

Rotala indica (Willd.) Koehne Branched herb; fls. purple. Common in wet lands and rice fields in plains.

R. verticillaris L. Small herb. Occasional in rice fields.

PUNICACEAE (FTN 1: 167)

Punica granatum L. மாதுளை Small tree/shrub. Mostly cultivated for fruits. E

ONAGRACEAE (FTN 1: 167-168)

Ludwigia adscendens (L.) Hara (= *Jiussiaea repens* L.) Aquatic floating herbs; stem floating; fl. cream-coloured. Fr. 10-ribbed. Frequent in fresh water ponds and ditches.

L. hyssopifolia (G. Don Exell.) Bushy shrub; fl. yellow. Fr. 8-ribbed. Common in marshy places.

L. octovalvis (Jacq.) Raven subsp. **sessiliflora** (Miq.) Raven (= *Jussiaea suffruticosa* L., *J.villosa* Lam.) காட்டு கிராம்பு Pubescent herb or undershrub. Fl. yellow. Fr. cylindric. Frequent in marshy areas in plain and lower hills. E

L. perennis L. (= *L. parviflora* Roxb.) Annual herb; fl. yellow; fr. 4-ribbed. Frequent in open fields and ditches in the plains.

TRAPACEAE (FTN 1: 168-169)

Trapa natans L. var. **bispinosa** (Roxb.) Makino சிங்காரா Aquatic herb; floating; fr. edible. Occasional in ponds and ditches. E

PASSIFLORACEAE (FTN 1: 169-170)

Passiflora edulis Sims. Passion fruit. Climber; fls. white; fr. green, mature yellow, edible. Cultivated in the hills; often found wild. E

P. foetida L. சிறு பூனைக்கொடி Climber; fr. orange coloured. Cultivated and has run wild. E

CARICACEAE (FTN 1: 170)

Carica papaya L. Tree; fls. creamish white. Cultivated in houses and gardens for valuable fruits and latex.

CUCURBITACEAE (FTN 1: 170-175)

Benincasa hispida (Thunb.) Cogn. (=*B. cesifera* Savi) பூசணிக்காய் Prostrate trailing herb; fl. yellow; fr. green, covered with white wax, edible. Cultivated in plains for fruits. E

Citrullus lanatus (Thunb.) Matsumura தர்பூசணி Cultivated in sandy river beds for fruits. E

Coccinia grandis (L.) Voigt (=*C. indica* Wight & Arn.) கோவை Climber; fl. white; ripe fr. red. medicinal. Cultivated for fruits; also wild in foothills. E

Cucumis melo L. முழாம் பழம் Sweet melo. Cultivated in sandy soil; fr. ellipsoid. E

C. sativus L. வெள்ளரிக்காய் Cultivated for fr. E

Cucurbita maxima Duchesne ex Lam. அரசானிக்காய் Climber; fls. yellow. Cultivated for fruits. E

C. moschata (Duchesne ex Lam.) Duchesne ex Poir. Climber. Cultivated for fruits. E

C. pepo L. சுரைக்காய் Climber. Cultivated for fruits. E

Gymnopetalum wightii Arn. Climber; fl. yellow. Rare in moist forests.

Gymnostemma pentaphyllum (Thunb.) Makina (= *G. pedata* Blume) Slender climber; fls. white. Occasional in open forests at higher elevations.

Lagenaria siceraria (Molina) Standley (= *L. vulgar is Ser.)* சுரைக்காய் Climber; fl. white; dried fr. used for swimming, domestic bowls, etc., Widely cultivated for fruits. E

Luffa acutangula (L.) Roxb. பீர்கங்காய் Climber; fls. yellow. Mostly cultivated for fruits. E

Momordica charantia L. பாவற்காய் Climber; fl. yellow; fr. green, edible. E

M. dioica Roxb. ex Willd. பலபக்காய் Climber; fl. yellow; fr. orange. Fairly common in foothills. E

Mukia madraspatana (L.) M. Roem. (= *Melothria madraspatana* (L.) Cogn. முசுமுசுக்கை Scabrous climber; fl. yellow; fr. green, ripe yellow. Occasional in hill forests.

Trichosanthes cucumerina L. புடலை Climber; fl. white; fr. long, edible. Cultivated for fruits. E

T. nervifolia L. கொம்பு புடலை Slender twining herb; fls. white. Occasional in foot hills near habitation. E

T. tricuspidata Lour. (= *T. palmata* Roxb.) Large climber; fr. red. Fairly common in foothills and plains. E

Zehneria maysorensis (Wight & Arn.) Arn. (= *M. perpusilla* sensu Gamble) Slender climber; fl. cream; fr. red. Fairly common in lower hills.

BEGONIACEAE (FTN 1: 175-176)

Begonia albo-coccinea Hook. Scapigerous herbs; fl. pink; fr. dried brown. Fairly common in most forests along streams and rivers.

Begonia malabarica Lam. Shrub, erect; fls. rose-coloured. Common in moist forests.

CACTACEAE (FTN 1: 176)

Opentia dillenii (Ker-Gawl) சப்பாத்திக் கள்ளி Succulent undershrub; fl. yellow; fr. green, ripe red, edible. Common in wastelands, well acclimatized. E

MOLLUGINACEAE

Glinus lotoides L. (= *Mollugo lotoides* (L.) Kuntze) Stellately tomentose procumbent herb; fl. green; fr. globose. Fairly common in the plains. E

G. oppositifolius (L.) A.DC. (= *Mollugo oppositifolia* L.) Prostrate diffuse herb; fl. green; fr. globose. Weed in wastelands and roadsides in lower hills.

Mollugo disticha Ser. Stout erect herb; fl.-cluster zig-zag. Mostly on sandy soils in plains.

M. nudicaulis Lam. + Foothills. Erect, branched herb; lvs. radical; infl. slender, erect. Fairly common in wet areas of plains.

M. pentaphylla L. பார்படகம் Slender herb; fls. white. Common weed in wet areas of plains.

UMBELLIFERAE (FTN 1: 178-181)

Bupleurum distichophyllum Wight & Arn. Hills. Erect slender herb, fls. white. Occasional in hill slopes at higher elevations.

B. wightii Mukh. (=*B. mucronatum* Wight & Arn.) Erect herb among bushes; fl. white. Fairly common along grassy slopes at higher elevations.

Centella asiatica (L.) Urban வல்லாரை Prostrate herb; fl. purple. Common in the plains also cultivated. E

Coriandrum sativum L. கொத்துமல்லி Aromatic herb; fl. pink/white. Mostly cultivated for leaves and fruits. E

Heracleum courtallense Gamble Tall herb; fls. white. Occasional on hill slopes.

H. rigens Wall. ex DC. var. **rigens** TALL erect herb; fls. white; Occasional in grassy slopes at higher altitudes.

Hydrocotyle javanica Thunb. Prostrate herb; fls. greenish. Frequent undergrowth in evergreen forests.

Pimpinella heyneana *(wall. ex Dc.)* Kurz Erect annual herb fls. white occasional in hill forests. E

ARALIOACEAE (FTN 1: 181-183)

Aralia malabarica Bedd. Shrub/small tree, glabrous or scattered with weak prickles or bristles; fls. whitish. Rather rare in hill forests.

Polyscias acuminata (Wight) Seem. Tree, glabrous; leaflets oblong-lanceolate, long acuminate. Occasional in hill forests.

Schefflera stellata (Gaertn.) Harms Shrub/tree, deciduous; leaves degitate; fl. green, in panicles, ripe fr. orange. Occasional in ravines in hill forests.

Schefflera venulosa (Wight & Arn.) Harms மொடக்காமா Large straggler, bark grey, shining;

S. wallichiana (Wight & Arn.) Harms Climbing shrub; fl. greenish yellow or reddish white. Not common in evergreen forests.

CORNACEAE (FTN 1: 183)

Mastixia arborea (Wight) Bedd. subsp. **arborea** Large tree; fl. pale yellow; silky pubescent. Not common in evergreen forests.

ALANGIACEAE (FTN 1: 182-184)

Alangium salvifolium (L.f.) Wang. அளஞ்சி Deciduous tree; fl. white; ripe fr; red, edible. Common in evergreen forests in lower altitudes. E

CAPRIFOLIACEAE (FTN 1: 184)

Lonicera leschenaultii Wall. Climbing shrub, bark light brown, papery; fl. white or creamy white. Common in evergreen forests.

Viburnum punctatum Buch.-Ham. ex D. Don கொணாகாரம் Tree; fl. white. Common in evergreen forests.

RUBIACEAE (FTN 2: 1-27)

Acranthera anamallaica Beddome Herbs; fl. blue. Rare in moist shady places of evergreen forests.

Acranthera grandiflora Beddome Herbs; fl. blue. Rare in moist forests.

Aidia gardneri (Thw.) Tirvengadam படரப்பான் Trees; fl. axillary cymes. Berries ovate, 1.7 x 1.8 cm. Common in hills.

Agrostemma courtallense Arn. Small herbs in rocky crevices; fl. white, terminal cymes. Capsules opening at apex. Common in hilly ranges.

Brysophyllum tetrandum (Beddome) Hook. f. ex Beddome Shrub or small tree; fl. white tinged rose. Berries ca 2 cm across ovoid or subglobose. Rare in hilly ranges.

Canthium angustifolium Roxb. Scandent shrub; lvs elliptic-lanceolate; fl. white. Common in hilly areas.

Canthium dicoccum (Gaertn.) Teijsm. & Binn. var. lanceolata (Arn.) Swamin. Small tree; fl. cream; fr. ellipsoid globose. Common in hills. E

Canthium dicoccum (Gaertn.) Teijsm. & Binn. var. **umbellata** (Wight) Sant. & Merch. நல்ல மந்தனம் Trees or shrubs; fl. greenish white; fr. obovoid. E

Canthium neilgherrense Wight var. neilgherrense Small tree or shrub; fl. axillary fascicles; fr. obovoid. Common in hilly regions.

Canthium parviflorum Lam. நல்லகாரை Thorny shrub; fl. yellowish white in axillary cymes; fr. obcordate. Common in hilly regions. E

Canthium rheedii DC. Scandent thorny shrub in hills.

Canthium travancoricum (Beddome) Hook. f. Trees.

Catunaregam spinosa (Thunb.) Tiruvengadum மதுகாரை Spinous tree; fl. white turning yellow; berry globose. Very common in hills. E

Chasalia curviflora (Wall. ex Kurz) Thw. var. **ophioxyloides** (Wall.) Deb & Krishna Hills. Common. shrub. fl. white. Fr. globose.

Dentella repens (L.) Forster & Forster f. Matty prostrate herb; fl. white; fr. globose. Common in low-lying areas and foothills. E

Fergusonia tetracocca (Thw.) Baill. Scabrous herb. Not common in hills.

Galium rotundifolium L. Herb or shrub. Common in hilly tracts.

Gardenia gummifera L.f. சின்ன கம்பிளி Small dec. tree. Common in deciduous forests.

Gardenia latifolia Ait. கும்பை Small dec. tree. Common in deciduous forests. E

Gardenia resinifera Roth கம்பிள், கும்பை Dec. tree. Common in deciduous forests.E

Haldenia cordifolia (Roxb.) Ridsdale கொடம்பி Tree. Common in deciduous forests.

Hedyotis affinis Roem. & Schultes Shrub; fl. bluish/pinkish white. Abundant in rocky edges and hills.

Hedyotis albo-nervia Beddome Glabrous shrubs; fl. in sessile cymes fascicled in axils or leaves. Rare in hilly areas.

Hedyotis auriculata L. Hills. Trailing ann. herb; fl. white; fr. globose, hispid. Common in hills. E

Hedyotis barberi (Gamble) Henry & Subram. Woody shrub; fl. white. Rare in hills.

Hedyotis diffusa Willd. Prostrate herb; fl. white; capsule globose, glabrous. Common in hilly ranges.

Hedyotis evalata (Gamble) Henry & Subram. var. agastyamalayana Henry & Subram. Woody shrub; fl. pinkish white or pale yellow; capsule subglobose. Rare in high ranges.

Hedyotis gamblei Henry & Subram. Slender shrub; fl. white; capsule globose. Rare in high ranges.

Hedyotis gracilis Wall. Slender erect herb. Not common in hills.

Hedyotis herbacea L. Erect herbs; fl. white; capsule ovoid. Common in wetlands and hills.

Hedyotis nitida Wight & Arn. Prost. herb; fl. white, sessible in axillary clusters; Capsule globose, glabrous. Common in grasslands.

Hedyotis puberula (G. Don) Arn. சிறு வேர் Stiff herb; fl. white; capsule ovoid. Common in hills and adjoining areas.

Hedyotis pumila L.f. Prostrate herb; fl. white; capsules obovoid. Rare in shady places.

Hedyotis purpurescens Hook. f. var. **purpurescens** Shrubs; fl. violet in panicles. Not common in hilly tracks.

Hedyotis purpurascens Hook. f. var. pallida (Gamble) Mohanan Shrub; lvs yellowish. Rare in grassy slopes.

Hedyotis travancorica Beddome Small undershrub; fl. white; capsule ovoid, glabrous. Rare in evergreen forests.

Hedyotis viscida Beddome Large handsome shrub, fl. white. Not common in evergreen forests.

Hymenodictyon orixense (Roxb.) Mabberly வெள்ளைக் கடம்பு A large deciduous tree; fl. greenish; capsule obovoid. Common in deciduous forests.

Ixora malabarica (Dennst.) Mabberly Erect shrub; fl. white in lax corymbs. Rare in low elevation evergreen forests.

Ixora pavetta Andr. கொரிவி. Tree; fl. white; fr. didymous. Common in hilly ranges. E

Knoxia sumatrensis (Retz.) DC. var. **sumatrensis** *(k. Corymbosa* auct. non Willd.) Erect undershrubs; fl. violet; fr. of 2 indehiscent mericarps. Common in deciduous forests.

Knoxia sumatrensis (Retz.) DC. var. **glaberrima** Bhattacharjee & Deb (*K. heyneana* auct non DC.) Erect herbs. Common in deciduous forests and grasslands.

Lasianthus cinereus Gamble Cinereus pubescent herbs; calyx pubescent; corolla puberulous. Rare in evergreen forests.

Lasianthus parviflorus Wight Slender glabrous shrubs. Rare in evergreen forests.

Mitragyna parviflora (Roxb.) Korth var. **parviflora** சின்னக் கடம்பு Dec. tree; infl. globose head; fl. cream; capsule globose. Common in dry forests.

Morinda pubescens J.E. Smith var. **pubescens** *(M. tinctoria* Roxb.) மஞ்சனத்தி Medium-sized tree; fl. white; fr. syncarp; wood yellow, used for agri. tools. Common in deciduous forests. E

M. umbellata L. Liana; fl. white; fr. orange. Very common in hills. E

Mussaenda balilla Buch. -Ham. Climbing shrub; fl. orange; berry obovoid. Common in lower elevations.

M. glabrata (Hook.f.) Hutchinson ex Gamble வெள்ள மடந்தை Climbing shrub; fl. orange-red; berries obovoid. Common in lower elevation forests. E

Mycetia acuminata (Wight) Kuntze Annual shrub. Rare in hilly ranges.

Neanotis indica (DC.) W.H. Lewis var. indica (*A. leschenaultiana* (Wall. ex Wight & Arn.) Hook.f.var. *affinis* (Wall. ex Wight & Arn.) Hook.f. Herbs; fl. white in corymbs. Common in margin of forests.

Neanotis monosperma (Wall. ex Wight & Arn.) W.H. Lewis var. **tirunelvelica** Henry & Chandrabose Slender herbs. Fl. white. Rare in hilly ranges.

Neanotis numularia (Arn.) W.H. Lewis (*Anotis nummularia* (Arn.) Benth. & Hook. f. ex Hook. f. Herbs. Fl. white. Rare in nevergreen forests.

Octotropis travancorica Bedd. Shrubs or small tree; fl. white; berries ellipsoid, 1-seeded. Common in evergreen forests.

Ophiorrhiza eriantha Wight Undershrubs; fl. pale red; capsule hairy. Common in evergreen forests.

Ophiorrhiza grandiflora Wight Undershrub. Common in evergreen forests.

Ophiorrhiza mungos L. கீரிப்பூண்டு Undershrubs; fl. white. Common in evergreen forests.

Ophiorrhiza pectinata Arn. Undershrubs. Common in evergreen forests.

Ophiorrhia roxburghiana Wight Undershrubs. Rare in evergreen forests.

Ophiorrhiza tirunelvelica Henry & Subram. Decumbent herbs; fl. white. Rare in evergreen forests.

Oxyceros rugulosa (Thw.) Tiruvengadum var. **rugulosa** (*Randia rugulosa* (Thw.) Bedd.) Large scandent shrubs; fl. white. Common in lower elevations.

Oxyceros rugulosa (Thw.) Tiruvengadum var. **speciosus** (Beddome) Kumari (= *Randia rugulosa* (Thw.) Hook. f. var. *speciosa* (Beddome) Hook. f.) Climbing shrubs. Common in hills.

Pavetta hispidula Wight & Arn. Shrubs. Common in evergreen moist deciduous forests.

Pavetta indica L. var. **indica** பாவட்டை Large shrubs or small trees; fl. white. Common in evergreen forests. E

Pavetta indica L. var. **montana** Thw. ex Hook.f. Small trees. Common in hilly ranges.

Psychotria anamallayana Beddome Small trees; fl. white. Rare in evergreen forests.

P. elongata (Wight) Hook. f. Shrubs. Fl. white. Common in evergreen forests.

P. flavida Talbot Shrubs; fl. white; fr. ellipsoid. Common in evergreen forests.

P. nigra (Gaertn.) Alston (=*P. thwaitesii* Hook.f.) Glabrous shrubs; fl. white; fr. ellipsoid. Not common in evergreen forests.

P. nudiflora Wight & Arn. var. **nuduflora** Glabrous shrubs; fl. white. Common in evergreen forests.

Rubia cordifolia L. மஞ்சிட்டி, சிவேலி Climbing shrub, stem angular; fl. white; ripe fr. blue. Common in evergreen forests. E

Saprosma corymbosum (Beddome) Beddome Shrub; fl. greenish yellow. Common in evergreen forests.

Spermacoce hispida L. Hispid herbs; fl. white-purple. Very common in open forests.

S. ocymoides Burm. f. Slender herbs; fl. white. Common in rocky edges in forests.

Tarenna asiatica (L.) Kuntze ex K. Schum. var. **asiatica** (= *Chomelia asiatica* (L.) Kuntze) குரா Large shrub; lvs. shining, drying black; fl. cream, fragrant; ripe fr blue. Common in evergreen forests. E

Wendlandia thyrsoidea (Schultes) Steud. (= *W. notoniana* Wall. ex Wight & Arn.) கடம்பன் Small tree; fl. white, fragrant. Common in evergreen forests. E

COMPOSITAE (ASTERACEAE) (FTN 2: 28-55)

Acanthospermum hispidum DC. Herbs; fl. yellow; achenes prickly. South American natived, introduced and naturalised. Common in wastelands.

Adenostemma lavenia (L.) Kuntze var. **lavenia** Sticky herbs; fl. white tinged pink. Not common in plains. E

Ageratum conyzoides L. பூம்புல்லு Annual herbs; fl. white-blue. Common from coastal - hilly ranges. E

Anaphalis leptophylla (DC.) DC. Slender herbs in damp places; fl. white. Rare in hilly slopes.

Anaphalis subdecurrens (DC.) Gamble Herbs; fl. white. Common in grasslands.

Artemisia nilagirica (Clarke) Pamp (*A. vulgar is* auct. non L.) Tall aromatic shrub; fl. white. Common in forest road cuttings. E

A. parviflora Buch.--Ham. ex D. Don perennial shrubs; fl. white. Common along road-cuttings of forests.

Bidens pilosa L. Herbs; fl. white; achenes awned. Abundant in wasteland and fields. E

Blaivillea acmella (L.) Philipson Scabrid herbs; fl. white (yellow), achenes angled. Rare weed in moist places in plains.

Blumea alata (D. Don) DC. (= *Laggera alata* (D. Don) Sch. --Hip. ex Oliver) Stout leafy herbs in hilly ranges.

B. lieracifolia (D. Don) DC. var. **macrostachya** (DC.) Hook.f. (= *B. macrostachya* DC.) Herbs. Common in hills.

B. mollis (D. Don) Merr. (= *B. wightiana* DC) + Hills. Woody herbs; fl. rose to pink. Common along streams of forests.

B. obliqua (L.) Druce (= *B. amplectans* DC.) + Foothills. Scandent herbs; fl. pink to purple. Common in sandy or swampy soils.

Conyza lonariensis (L.) Cronquist (= *C. ambiqua* DC.) American wood. Erect soft villous herbs, often on road-sides; fl. tinged purple. Common weed in opened forests.

Crassocephalum crepidioides (Benth.) S. Moore (*Erechtites Valerinifolia* sensu Fischer) A stout, glabrous erect herb; fl. orange coloured. Common as a weed in hills.

Dichrocephala bicolor (Roth) Schlecht. (*D. latifolia* DC.) Herb rooting at nodes; fl. pink, Rare in moist forests.

Dicosna tomentosa Cass. Erect branched undershrub; fl. yellow. Common in foothills. E

Eclipta prostrata (L.) L. (*E. alba* (L.) Hassk. கவந்தக்காரா Prostrate herbs; fl. white. Common weed in plains. E

Elephantopus scaber L. ஆனைச்சுவடி Scapigerous herb; fl. blue; achenes oblong. Common in plains and mountains. E

Emilia scabra DC. Pubescent herbs. Common in hills.

E. sonchifolia (L.) DC. Soft straggling herb; fl. purple or pink. Common weed in plains and hills. E

E.Zeylanica Clarke *Var. Zeylanica* Slender herbs in hills.

Epaltes divaricata (L.) Cass. Small annual herbs; branchlets winged; fl. pink-purple. Rare in coastal areas.

Eringeron kavinskianus DC. (*E. mucronatus* DC.) Prostrate herbs; fl. white or yellow. Very common weed in plains and hills. E

Flaveria trinervia (Spreng.) C. Mohr (*F. australasica* Hook.) Glabrous herbs, muddy places on river banks; fl. yellow. Common in plains.

Gnaphalium polycaulon Pers. (*G. indicum* auct non L.) White pilose herb; fl. cream. Common in field and hills.

Gynura lycopersicifolia DC. Slender erect herb. Common along the banks of rivers.

Gynura nitida DC. + Hills. Fleshy herbs; fl. orange-coloured. Common in hills.

Helianthus annus L. சூரிய காந்தி Sunflower. Subshrubs; fl. yellow. Cult. for oil seeds. E

Helichrysum buddleioides DC. (= *H. hookerianum* Wight &Arn.) Undershrub; fl. yellow. Common along road-cuttings of forests.

Kleinia grandiflora (DC.) N. Rani (*Notonia grandiflora* Wall. ex DC.) Fleshy herb; fl. cream. Not common in hilly ranges. E

Launaea acaulis (Roxb.) Babe ex Kerr (*L. glabra* DC.) Scapigerous herb; fl. yellow. Rare in exposed forests.

L. intybaeca (Jacq.) Beauv. (*L. uncinata* DC.) Plains. Tall glabrous herbs in rocky slopes.

Parthenium hysterophorus L. Erect herb; fl. white. Fast spreading weed in plains.

Phyllocephallum scabridum (DC.) Kirkman (*Centratherum molle* (DC.) Benth. Herb; fl. pink. Common in grasslands.

Pulchea tomentosa DC. Large shrub.

Senecio ansteadi Tad. & Jacob Climbing shrub. Rare in hilly ranges.

S. ludens Clarke Slender erect herb; fl. yellow. Rare in deciduous forests.

S. scandens Buch. --Ham. ex D. Don (*S. wightianus* DC.) Slender climber, stem zig-zag. Rare in deciduous forests.

S. tenuifolius Burm. f. Slender much-branched annual herbs; fl. yellow. Rare in deciduous forests.

Sigesbeckia orientalis L. காடாம்பூ Large annual viscid herb; fl. yellow or white. Common in fields and wastelands. E

Sonchus oleraceus L. Herbs; fl. yellow. Common weed in cultivated fields. E

Sphaeranthus indicus L. கொட்டக்கரந்தை Aromatic herb; fl. purple. Common in wetlands and foothills. E

Synedrella nodiflora (L.) Gaertn. Herb; fl. yellow. Common weed in wastelands. E

Tagetes erecta L. துலுக்க சாமந்தி Erect herb; fl. yellow. Cultivated in gardens. E

Tithonia diversifolia (Hemsl.) A Gray Stout annual herb; fl. yellow, showy. Common in wastelands.

Tridex procumbens L. வெட்டுக்காயத்தழை Hispid herb; fl. yellow. Abundant and common weed in wastelands and foothills. E

Vernonia albicans DC. Herb; fl. purple. Common inhilly ranges.

V. bourdillonii Gamble. Shrub. flowers pink. Rare in rocky slopes of high ranges.

V. cinerea (L.) Less மூக்குத்திப்பூண்டு + Hills. Erect herb. Fl. pink to purple. E

V. conyzoides DC. Herb or shrub; fl. pink. Common in moist deciduous forests.

V. divergens (Roxb.) Edgew. Shrub; fl. pink. Common in dry deciduous forests.

V. elaeagnifolia DC. Climbing shrub trained to trellisee; fl. pink. Cultivated. E

V. gossypiana Gamble Handsome undershrub; fl. pink. Rare in hills.

V. indica Clarke Large erect undershrub; fl. reddish-purple. Common hills.

V. ramaswamii Hutchinson Small undershrub; fl. pink. Common along river banks in hills.

V. setigera Arn. Erect undershrub. Common in hills.

V. travancorica Hook. f. தெம்பூ Small tree; fl. pink. Common in shola forests.

Vicoa indica (L.) DC. ஜிமிக்கிப்பூ Herbs; fl. yellow. Very common in wetlands. E

Wedelia chinensis (Osbeck) Merr. (*W. calendulacea* Less) Procumbent perennial herbs; fl. yellow. Common in wetlands. E

W. urticaefolia (Blume) DC. var. wightii DC. Erect herb. Common in hills.

Xanthium indicum Koen. (*X. strumarium* L.) மருளுமதம் Annual herb; fl. white; urticle prickly. Common in wastelands. E

Youngia japonica (L.) DC. (*Crepis japonica* Benth.) Slender herb; lvs rossette, milky latex; fl. yellow. Common in higher altitude.

GOODENIACEAE (FTN 2: 55)

Scaevola plumieri (L.) Vahl Succulent herbs; fl. white or greenish yellow. Common in coastal regions.

CAMPANULACEAE (FTN 2: 55-56)

Wahlenbergia marginata (Thunb.) A. DC. (*W. gracilis* (Forest.f.) Schrader ex A. DC Perennial herb; fl. blue. Common in hills. E

LOBELIACEAE (FTN 2: 56-57)

Lobelia alsinoides Lam. (*L. trigona* Roxb.) Annual prostrate herb, rooting at nodes. Fl. blue to violet. Seeds 3-gonous. Common in wet &moist places. E

L. heyneana Schultes (*L. trialata* Buch.--Ham. ex D. Don incl. var. *lamiifolia)* Slender erect herb; fl. pink; seeds biconvex. Common in rocky slopes.

L. nicotianifolia Roth ex Schultes var. **nicotianifolia** காட்டு புகையிலை Large biennial herb; fl. white. Common in grassy slopes. E

L. nicotianifolia Roxb. ex Schultes var. **trichandra** (Wight) Clarke Large biennial or perennial herb; fl. white. Common in grassy slopes. E

VACCINIACEAE (FTN 2: 57)

Vaccinium leschenaultii Wight var. **lechenlaultii** கலாவு Small tree; fl. pink. Common in hills. E

V. neilgherrense Wight கலாவு Large shrub or small tree; fl. white or rose-coloured. Common in hilly areas.

PLUMBAGINACEAE (FTN 2: 59-198)

Plumbago zeylanica L. சித்திரமூலம் Erect or subscandent herb; fl. white; fr. glandular--hairy. Common in coastal region & plains. E

MYRSINACEAE (FTN 2: 60)

Ardesia littoralis Andr. Somewhat succulent shrub; fl. rose-coloured. Not common in hills.

Ardisia missionis Wall. ex A. DC. (*A. courtallensis* Wight) Small tree; fl. pink; berries red. Common in evergreen forests.

A. pauciflora Heyne ex Roxb. Shrub or small tree; fl. white; berries red. Common in evergreen forests.

A. rhomboidea Wight Glabrous shrub or small tree; fl. pinkish--white. Common in evergreen forests.

A. solanacea Roxb. Shrub; fl. rose-white; fruit globose. Common in moist places, along streams and evergreen forests. E

Embelia basal (Roem & Schultes) A. DC. Large climbing shrub; fl. orange, ripe fruit red. Common in hills. E

E. ribes Burm.f. Hills. Large scandent shrub; fl. white or greenish white; fr. globose. Common in evergreen forests.

E. tseriam-cottam (Roem & Schultes) DC. Large shrub or small tree; fl. orange; fr. red. Common along the margins of forests. E

Maesa indica (Roxb.) DC. Large shrub or small tree; fl. white; fr. fleshy with a swollen cuple. Common in wastelands and open forests. E

Rapanea wightiana (Wall. ex DC.) Mez Small tree; fl. pinkish-yellow; fr. purple. Common in evergreen forests.

SAPOTACEAE (FTN 2: 62-64)

Isonandra lanceolata Wight var. **lanceolata** Small tree; fl. yellowish white. Common in evergreen forests.

Madhuca longifolia (Koen.) Macbr. var. **longifolia** இலுப்பை Large tree; callyx brown tomentose; fruits ellipsoid. Common in deciduous forests, planted in temples. E

Manilkara hexandra (Roxb.) Dubard (*Mimosops hexandra* Roxb.) பாலா Tree; fl. white; fr. reddish yellow. Rare in coastal regions. E

Manilkara roxburghiana (Wight) Dubard கன்னா பாலை + Hills. Large evergreen tree; wood reddish brown. Common in evergreen forests. E

Manilkara zapota (L.) P. Royan (*Achras zapota* L.) சப்போட்டா Tree; fl. white; fruit globose, rusty brown. Cultivated. E

Mimosops elengi L. மகிழம் Tree; fl. creamy white with orange red at mouth, v. fragrant; berry ovoid. Cultivated for fl. E

Palaquium ellipticum (Dalz.) Baillon (*Dichopsis elliptica* (Dalz.) Benth. & Hook.f. காட்டு இலுப்பை Large tree; fl. white. Common in evergreen forests. E

EBENACEAE (FTN 2: 65)

Diospyros assimilis Beddome கருந்தாலி Large tree; fl. pale yellow. Common in evergreen forests. E

Diospyros barberi Ramaswami Small tree; male fl. in short cymes, female fl. with large foliaceous calyx lobes. Rare in evergreen forests.

Diospyros torrea (Willd.) Bakh. var. **buxifolia** (Rottb.) Bakh. (*Maba buxifolia* (Rottb.) Juss.) Large shrub or small tree; fr. red. Common in foothills.

Diospyros torrea (Willd.) Bakh. var. **neilgherrensis** (Wight) (*Maba neilgherrensis* Wight) Tree in deciduous forests.

Diospyros foliolosa Wall. ex A. DC. வெள்ளைதுவரை Medium tree; fl. yellow; fr. yellow when dry. Not common in foothills.

Diospyros humilis Bourd. வெள்ளைதுவரை Small tree; fl. white. Common in evergreen forests.

Diospyros malabarica (Desr.) Kostel. (*D. peregrina* auct. non Gaerke) தும்பிகா Medium tree; leaves coriaceous, tender leaves pink. Common in evergreen forests.

Diospyros melanoxylon Roxb. பீடி இலை Medium sized tree in dry zones.

SYMPLOCACEAE (FTN 2: 68-69)

Symplocos cochinchinensis (Lour.) Moore ssp. **laurina** (Retz.) Nooteb. (*S. spicata* Roxb. var. *laurina* (Retz.) Clarke கம்பிளிவெட்டி Small tree; fl. white. Common in evergreen forests.

S. macrocarpa Wight mild frag.; fr. ellipsoid. Rare in evergreen forests.

S. macrophylla Wall. ex A. DC. subsp. **rosea** (Bedd.) Nooteb. Small tree; fl. white. Rare in evergreen forests.

S. oligandra Bedd. Tree; fl. white. Rare in shola forests.

S. pendula Wight Shrub or small tree; fl. white, pendulous; fr. green. Rare in shola forests.

S. wynadense (Kurze) Nooteb. (*S. acuminata* Bedd.) Small tree; fl. white; fr. green. Not common in evergreen forests.

OLEACEAE (FTN 2: 69-74)

Chionanthus linoceroides (Wight) Bennet & Raizada Small tree; fl. white. Common in lower altitude evergreen forests.

C. mala-elengi (Dennst.) P.S. Green (*Linociera malabarica* Wall. ex G. Don) சோர்கிலி Small tree; fl. white or yellow, fragrant; fr. blue. Common in evergreen forests.

Jasminum angustifolium (L.) Willd. var. **angustifolium** காட்டுமல்லி Climbing shrub; fl. white. Common in lower elevations.

J. angustifolium (L.) Willd. var. **sessiliflorum** (Vahl) P.S. Green (*J. sessiliflorum* Vahl) கருவிலாங்கொடி Climber; lvs small; fl white. Common in foothills.

J. auriculatum Vahl. முல்லை Scandent shrub; fl. white, fragrant. Cultivated.

J. calophyllum Wall. ex A. DC. Slender climbing shrub; fl. white. Common in foothills.

J. cordifolium Wall. ex G. Don A large climbing shrub with twisted stem; fl white. Common in foothills.

J. cuspidatum Rottl. (*J. rigidum* Zenk) ஊசிமல்லி Erect shrub; fl white. Cultivated.

J. grandiflorum L. மன்மதபானம் Climbing shrub; fl white, fragrant. Cultivated.

J. malabaricum Wight Large climber; fl white, fragrant. Common in hills.

J. ritchiei Clarke Climbing shrub; fl white. Common in lower altitudes.

J. sambac (L.) Ait. var. **sambac** Erect or climbing shrub; fl white fragrant. Cultivated.
E

Ligustrum decaisnei Clarke var. **microphylla** Clarke Shrub; panicle diffuse. Rare in lower altitude.

L. gamblei Ramam. (*L. roxburghii* Clarke) சிட்டிபுலிஞ்சி Small tree; panicles broad. Not common in sholas.

L. perrottetii DC. Large shrub or small tree; fl. cream, fragrant; fr. ellipsoid blue when ripe. Common along the banks of rivers and streams.

L. robustum (Roxb.) Blume subsp. **walkeri** (Decne) P.S. Green (*L. walkeri* Decne) Small tree; infl. with large bracteate panicles. Common in lower altitude.

L. travancoricum Gamble Small tree; infl. depressed; fl. pale yellow. Not common in evergreen forests.

Olea dioica Roxb. எடலை Medium-sized tree; fl. cream-white. Common in hills.

O. polygama Wight Small tree; fl white; Common in shola forests.

APOCYNACEAE (FTN 2: 75-80)

Aganosma cymosa (Roxb.) G. Don மணிமலாங்கொடி Large rambling climber; fl cream, fragrant; follicles in pair. Common in hills.

Allamanda carthartica L.var.**nobilis** Bailey *(A.carthartica L.)*மஞ்சள்பத்தி Straggling shrub:fl golden yellow; fr spiny. Often grown in gardens E

Alstonia scholaris (L.) R.Br. பாலை Large tree; fl cream, fragrant, follicles to 30 cm long. Not common in evergreen forests. E

A.venustus R. Br. Shrub; fl white, fr green. Not common in the opening of forests.

Carissa cerandas L. கலாக்காய் Large thorny shrub or small tree; fl white; ripe fr blue/ purple, edible often cultivated. E

C.congesta Wight Erect shrub; fl white. Rare in lower elevations.

C.spinarum L. சிறுகிலா ,Thorny shrub, branches zig-zag; fl white with red tings; fr tinged red, ripe blue. Common in foothills. E

Catharanthus pusillus (Murray) G.Don (Lochnera pusilla.(K.Schum). பாலை செத்தை Herb; fl white; follicles 4.5 cm long. Common weed.

C.roseus (L) G.Gon (*Lochnera rosea* (L) Reichb. நித்தியகல்யாணி Subshrub; fl white or pink; follicles up to 4 cm long. Cultivated.Common in lower elevations. E

Ellertonia rheedii Wight Climber; fl slender; follicles divaricate. Common in evergreen forests.

Holarrhena antidysentrica (Roxb.ex Fleming)Wall வெப்பாலைTree; fl white. Common in deciduous forests.

Hunteria zeylanica (Retz.)Gard. ex Thw. (*H.corymbosa Roxb.)* Small tree; fl pale yellow. Not common in evergreen forests.

Nerium oleander L. செவ்வரளி Large shrub; fl red. Cultivated in plains & foothills E

Rauvolfia densiflora (Wall.)Benth. ex Hook. f. Large shrub; fl white or pink. Common in lower altitude. E

R.serpentina (L.)Benth. ex Kurz சர்பகந்தி Herbaceous shrub; fl white; mature fr red-black. cultivated in.

R.tetraphylla L. (R.canescens L.) சிவனமால்பொடை Shrubs; fl white; fr globose, mature fr red-black cultivated in gardens.

Strophanthus wightianus Wall. ex Wight Climbing shrub; fl white; follicles woody, brown. Rare in lower altitudes.

Tabernaemontana divaricata (L) R.Br. ex Roem & Schultes *(Ervatamia cononar less ia* (Jacq.) Stapf) நந்தியாவட்டை Shrub; fl white, juice used as eye-lotion; follicles 10 cm long. crown in household gardens. E

T.gamblei Subram. & Henry *(Ervatamia caudata* Gamble) Shrub; fl white. Common in evergreen forests.

T.heyneana Wall. Small tree; fl white; follicles orange-yellow. Common in deciduous forests.

Thevetia peruviana (Pers.) Merr. *(T.neriifolia* Juss.ex Steudel) Shrub; fl. yellow, showny; drupe turbinate, 3 cm across. Common in lower altitude. E

Vallaris solonacea (Roth) Kuntze Large straggling shrub; fl. white; follicles up to 20 cm long. Not common in dry forests. E

Wrightia tinctoria (Roxb.)R.br.வெப்பாலை Tree; fl white; follicles up to 30 cm long.Common in deciduous forests. E

ASCLEPIADACEAE (FTN 2: 80-90)

Asclepias curassavica L. Herb; fl red; follicles long pointed. Common in low lands. E

Calotropis gigantea (QL) R.Br. எருக்கு Large milky shrub; fl purple; follicles inflated, B x 4 cm.Common in plains & foothills. E

Caraluma adscendena (Roxb.)haw. var. **attenuate (Wight)Grav.&** Mayuranathan (*C.attenuata Wight*) முயல்கொம்பு செடி

Fleshy herb; corolla with purple hairs at tip; follicles up to 6 mm long. Common in dry areas. E

C.pauciflora (Wight) N.E. Br. Small diffuse fleshy herbs; fl purple. common in scrub forests.

C.umbellata Haw. கல்முளையான்

Erect succulent herbs; fl. in umbels, purple with yellow stripes; follicles up to 10 cm long. Common in dry zones. E

Ceropegia candalabrum L. var. **biflora** (L) M.Y. Ansari (*C.tuberosa Roxb)*

Twining shrub with tuberous roots, latex watery. Common in foothills. E

C.ciliata Wight Slender hispid twinger; fl pale green-purple. Not common in lower altitude.

C. elegans Wall. (*C.mysorensis* Wight) Slender twiner; fl.bluish green. Common in lower altitudes.

C. intermedia Wight. Slender twinger; fl purple. Not comon in hilly areas.

C. juncea Roxb. Leafless, twiner; latex watery; corolla brownish purple, showy. Common in foothills..

Cynancthum tunicatum (Retz.) Alston *(C.pauciflorum* R.Br.)வெள்ளைபடல்கொடி Herbaceous climber; fl white; follicles not winged. Common in hilly ranges.

Gymnema elegans Wight & Arn. Slender climber; corona without fleshy appendages. Common in scrub forests. E

G.sylvestre (Retz.) R.Br.ex Schultes சிறு குறிஞ்சா Climber; fl dull yellow, corona with fleshy appendages between lobes. Common in scrub forests.

Holostemma ada-kodien Schultes (H.annulare Roxb.) K.Schum.Large climber; fl pale pink. Not common in open forests. E

Hoya pauciflora Wight Slender epiphytic climber; fl white. Common in higher altitude.

Leptadenia reticulata (Retz.) Wight & Arn. பாலைக்கீரை Climbing shrub on hedges, latex watery; fl yellow; follicles up to 6 x 2 cm. Common in foothills. E

Marsdenia tirunelvelica Henry & Subram.Twining undershrub, stem terete, fl greenish yellow. Rare in hilly terrain.

Pentatropia capensis (L.f.) Bullock (*P.microphylla* Heyne ex Roth)Wight & Arn.)உப்பிலி Climber; fl purple; follicles basally inflated.Common in open forests and foothills E

Pergularia daemia (Forssk.)Chiov. *CP.extensa (*Jacq.)N.E. Br.சித்தல்கொடி Climber; fl green foetid; follicles curved, spiny. Common in wastelands and foothills. E

Sarcostemma acidum (Roxb.)Voight *(S.brevistigma* Wight & Arn.) சோமாமம் Trailing shrub over bushes and rocks; fl creamy white; stem jointed. Common in lower altitudes.

S.brunonianum Wight & Arn. பெரு ஆத்தன்கொடி Leafless twiner, stem fleshy, cylidnrical, fl cream. Common in hills. E

S.intermedium Decne கொடிகள்ளி Shrub; fl cream. Common in dry forests. E

S.secamone (L) Bennet *(Oxystelma esculentum(*L.f.)R.Br.ex Schultes ஊசிப்பாலை

Twining herb; fl. yellow. Common on hedges and bushes.

Secamone emitica (Retz.)R.Br.ex Schultes நிலமரந்தைக்கொடி Wiry,much-branched climbing shrub; fl. yellow; follicles up to 7 x 1 cm.Common in foothills E

Telosma minor (Andr.) Craib சம்பங்கி Twiner, fl.yellow sweet scented. Cultivated in gardens.

Toxocarpus beddomei Gamble Slender climber; fl white. Rare in higher altitudes.

T.kleiniil Wight & Arn. Slender climbing shrub; fl. white; follicles up to 15 cm long.Common in lower altitude.

Tylophora capparidifolia Wight & Arn. Much twining undershrub; later watery; fl dark purple.Common hills.

T.fasciculata Buch. Ham. ex Wight & Arn. Erect undershrub among grasses; fl. minute. Not common in hills.

T.indica (Burm.f.)Merr. (*T.asthmatica* (L.f.) Wight & Arn.)பாலைக்கீரை Much-branched climber, latex watery; fl greenish yellow outside, purple inside. Medicinal.Very common in foothills. E

T.pauciflora Wight & Arn. Small climber; fl purple. Common in foothills.

T.subramanii Henry Climbing undershrub; fl. white-cream. Rare in higher altitude.

T.tenuis Blume Slender twining undershrub, fl.purple.Rare in exposed forests in lower altitude.

Wattakaka volubilis (L.f.)Stapf *(Marsdenia volubilis* (L.,f.) Cooke குறிஞ்சா Straggler; fl green; follicles up to 9 x 3 cm. Common in plains and hills. E

PERIPLOCACEAE (FTN 2: 90-91)

Cryptolepis buchananii Roem & Schultes பால்கொடி, Climber; fl greenish-yelow;follicles up to 7 cm long.Common in deciduous forests.

C.grandiflora R. Br. Slender climber; fl cream-yellow; follicles up to 10 cm long,Common in deciduous forests.

Cryptostigma grandiflora R.Br., கருடபாலை Stout climbing shrub; fl purple, showy; follicles up to 12 x 3 cm. Cultivated in gardens. E

Hemidesmus indicus (L.)R.Br. நன்னாரி Climber/straggler, roots very aromatic, flavouring value; fl yellow; follicles up to 10 cm long. Common in foothills. E

Janakia arayalpatahra joseph & Chandrasekaran. Leafy perennial undershrub; fl greenish cream. Rare in higher altitudes. E

LOGANIACEAE (FTN 2: 91-92)

Mitrasacme indica Wight *(M.alsinoides auct.* non R.Br.) Slender annual herbs; fl cream; capsule depressed-globose.Common in gravelly shady moist places.

Strychnos nux-vomica L. எட்டி Tree; fl green, fragrant; fr thick shelled, orange in colour.Medicinal.Common in deciduous forests. E

S.potatorum L.f. தட்டான் கொட்டை tree; fl white; fr thin shelled, blue when ripe.Common in deciduous forests.

S.wallichiana Steud.ex DC. (S.*cinnamomifolia* Thw.) வள்ளிகாஞ்சிரம் Climber; fl greenish yellow.Common in deciduous forests. E

GENTIANACEAE (FTN 2: 92-96)

Canscora heteroclita (L.) Gilg. *(C.sessiliflora* Schultes & Schultes f.) Erect herb. stem 4-winged; fl rose to pink. Common in moist areas.

C.roxburghii Arn. Miq. *(C.nallichii Clarke)* Common in grasslands. Erect herbs; fl rose- coloured.Common in hills.

Enicostema axillare (Lam.) Roynal *(E.littorale* auct. non Blume) வெள்ளருகு Herbs; fl white. Common in plains.

Exacum atropurpureum Bedd. Erect herb; fl blue. Common in high altitude grasslands.

E.courtallense Arn. (incl.var.laxiflorum) Perennial herbs; lvs fleshy; fl blue. Rqare in higher altitude.

E.pedunculatum L. Herbs;fl blue; medicinal.Common in moist areas and foothills. E

E.sessilis L. Annual herbs; fl blue. Common in coastal to hills.

E.travancoricum Bedd. Herbs; fl pink. Rare in higher altitudes.

E.wightianum Arn.var.**wightianum** (*E.atropurpureum* Bedd.var.palghatense Gamble) Herbs; fl bright blue. Common in hills.

E.wightianum Arn. var. **uniflorum** Henry & Swamin. Herbs; fl blue. Rare in higher altitude.

Gentiana pedicellata Griseb.var **wightii** Kusnezov. Herbs; fl pale blue. Common in grass land.

G.quadrifaria Blume var. zeylanica (Griseb.) Kusnezov **Herb; fl blue**. Common in higher altitudes.

Hopea fastigiata (Griseb.) Clarke.Small herb; fl yellow.Common in hills.

Swertia angustifolia Buch. -Ham.var.**pulchella** (Buch.-Ham. ex D. Don) Burkill. Erect herb; fl white. Common in hills. E

MENYANTHACEAE (FTN 2 : 96)

Nymphoider aurantiacum (Dalz.) Kuntze Aquatic herb; fl white. Rare in ponds.

N. hydrophylla (Lour.)Kuntze *(Limnanthemum cristatum (*Roxb.) Griseb. Aquatic herb; fl white. Comon in ponds.

N.indicum (L.)Kuntze. Aquatic herb; fl white, throat yellow. Common in ponds. E

HYDROPHYLLACEAE (FTN 2: 97)

Hydrolea zeylanica (L.)Vahl. Annual herbs; deep blue; fr. globose. Common in swamps and coastal areas.

BORAGINACEAE (FTN 2: 97:101)

Coldenia procumbens L. சிறுபடை Prostrate herb; fl cream. Common in moist ground and clayey soil.

Cordia gharaf (Forssk.)*(C.rothii Roem* & Schultes) நரிவிலி, Small tree; fl white; fr yellow or reddish brown.Common in foothills.

C.obliqua Willd.var.obliqua Tree; fl white; fr yellow or pink. Common in dec.forests. E

Cynoglossum zeylanicum (Hornem.) Thunb. ex Lehm. *(C.denticulatum.)* A.DC.var.*zeylanicum* (Hornem.) C.B. Cl.)பிசின் ஒட்டரை Erect herb; fl blue-white. Common in hilly slopes.

Ehretia canarensia (Clarke) Gamble Small tree; fl white. Common in foothills.

E.ovalifolia Wight. Small tree; fl white; fr red. Common in deciduous forests.

E.wightiana Wall. ex. G.Don. Shrub; fl white. Common in hills.

Heliotropium curassavicum L. Fleshy herb; fl white. Common weed in wastelands.

Heliotropium indicum L. தேன் கொடுக்கு பூண்டு Herb; fl white-blue. Common in foothills & wastelands. E

H.marifolium Retz. subsp. **wallichii** (Clarke) Kazmi *(H.scabrum.* Retz. var. *wallichii* (Clarke) Gamble). Branched herb; fl white. Common in wastelands and road sides.

H.ovalifolium Forssk. Erect herb; fl white. Common in wastelands.

H strigosum Willd. subsp. **brevifolium** (wall.) Kazmi *(H.brevifolium* Wall) Undershrub; lvs white strigose, fl white. Common in hilly slopes.

H.subulatum (Hochst.ex DC.)Vatke தேன்பூண்டு Erect annual herb; fl white. Common in black-cotton soil. E

H.supinum L. Prostrate herb; fl white. Common in black-cotton soil.

Rotula aquatica Lour. Branched shrub; fl purple; fr red or orange. Common. banks of rivers and streams.

Trichodesma indicum (L) Annual herbs; fl pink or white. Weed of cult. and wastelands.

T.zeylanicum (Burm.f.)R.Br. Annual herb; fl blue. Common in dry forests and plains.

CONVOLVULACEAE (FTN 2: 101-111)

Argyreia daltonii Clarke கருஊனாங்கொடி Climber; fl pink.Common in open forests.

A.elliptica (Roth) Choisy தாலிவெண்டங்கொடி Bushy climber; fl pale purple. Common in open forests.

A.hirsuta Wight & Arn Large shaggy climber; fl purple; fr yelow. Common in the margins of evergreen forests.

A.imbricata (Roth)Sant. & Patel *(Lettsomia aggregata* Roxb.,L.*mysorensis* Clarke). Large climbing shrub; fl pink; fr red. Common in hilly slopes. E

A.kleiniana (Roem. & Schultes) Raizada *(A.bracteata* Choisy)மலை ஊணாங்கொடி Climbing shrub; fl red with purple throat. Common in lower elevations.

A.nervosa (Burm.f.)Boj. *(A.speciosa* Sweet) சாமுத்ரபட்சி Large climbing shrub; fl purple, silky pubescent. Often cultivated run wild.

A.populifolia Choisy. Slender herb; fl rose-purple.Common in foothills & plains.

A.sericea Dalz. Large silky twiner; fl pink. Rare in hilly slopes.

Bonamia evolvuloides (Choisy)Raizada *(Brewertia evolvuloides* Choisy). Erect branched undershrub; fl white. Common from coastal to foothills.

Cressa cretica L. உப்பு மரிக்கொழுந்து. Small erect undershrub; fl white; fr globose. Common in saline areas E

Erycibe paniculata Roxb. ஊணாங்கொடி. Large climbing shrub; fl white. Rare in evergreen forests.

Evolvulus alsinoides (L) விஷ்ணுகிரந்தி. Slender, herb; fl blue. Very common in wastelands and foothills.

Hewittia sublobata (L.f.) Kuntze (*H.bicolor* (Vahl) Wight & Arn. Twining herbs; lv 3-nerved; fl yellow. Common in foothills and plains.

Ipomoea aquatica Forssk. *(I.reptans* Poiret)சர்க்கரை வள்ளி, Trailing herb, branchlets floating; fl pink. Common in clayey soil and marshy places. E

I. asarifolia (Desr.)Roem. & Schultes *(I.repens* Lam.) Lvs reniform; fl white. Common in wet places, backwaters and ponds.

I.batatas (L.)Lam. சர்க்கரை வள்ளி கிழங்கு. Tubers; fl pink. Cultivated for tubers. E

I.campanulata L. (incl. var. **illustris**) Large climber; fl rose-coloured or white. Common in hilly slopes.

I.divesifolia R. Br. *(I.laciniata* Cl.) A slender creeping; fl white. Common in hilly areas.

I.eriocarpa R. Br. *(I.hispida* (Vahl) Roem. & Schultes) Slender twining herb; fl pink.Common in plains and foothills. E

I.hederifolia L. (*Quamoclit phoenicea* (Roxb.) Choisy) கானவள்ளி கொடி, Weak climber; fl red, showy. Common in foothills & plains.

I.indica (Burm.f.) Merr. *(I.learii* Pant) Climber on bushes; fl blue. Common in plains & foothills.E

I.nil (L)Roth (*I.hederacea* auct. non (L.)Jacq.) கக்கட்டான், Slender climber. Lvs 3-1obed; fl pink-purple. Common in open forests.

I. obscura (L.)**Ker**-Gawl. சிறுத்தலை. Slender climber.Lvs cordate; fl yellow.Common inmplains. E

I.pes-caprae (L) R.Br. குதிரைக் குளம்பு. Creeper; lvs 2-lobed. fl. pink. Common along banks of rivers. E

I.pes-tigridis L. பூனைக்கீரை. Hairy climbing herb; lvs 5-9-lobed; fl white. Common in fields. E

I.quamoclit L.மயில்மாணிக்கம். Slender twiner; fl red. Common weed, often cultivated. E

I.sepiaria Koen. ex Roxb. தலிக்கீரை. Slender climber; fl cream or pink. Common in moist deciduous forests. E

I.staphylina Roem & Schultes ஊனாங்கொடி Hills, Large climbing shrub on bushes; fl pink. Common in lower altitude.

I.wightii (Wall.)Choisy. Climbing undershrub; fl pink-purple.Common in hilly ranges.

Jacquemontia paniculata (Burm.f.)Hallf. Twining herb; lvs cordate; fl white. Common in plains.

Merremia aegyptica (L) Urban. Twining herb; fl white. Common in plains.

M.dissecta (Jacq.)Hall.f.Twining herb. hairy; fl white. Common in plains and coast.E

M.emarginata (Burm.f.)Hall.f. பெரட்டைக்கீரை. Prostrate herb; fl yelow. Common in scrub forests.,wE

M.hederacea (Burm.f.) Hall.f. *(M.chrysoides* (Ker-Gawl.) Hall.f.) Climbing herb; fl yellow. Common in scrub forests.

M.tridentata (Linn.) Hall.f. Prostrate herb; fl cream. Common in plains. E

M.turpethum (L.) G.L. Shah & R.G.Bhat *(Querculina turpethum)* (L)A.Siva Manso) Climbing herb; fl white. Common in plains. E

M.umbellatum (L)Hall.f. Climber; fl white. Common in moist deciduous forests. E

M.vitifolia (Burm.f.)Hall.f. Climber, hairy; fl yellow.Common in plains E

Rivea hypocrateriformis (Desr.)Choisy புதிக்கீரை. Climbing shrub on bushes; fl white,fragrant.Common in foothills.

SOLANACEAE(FTN 2: 111-118)

Browallia americana L. Herb; fl blue. Cultivated in gardens.

Capsicum fruitescens L.மிளகாய் perennial extensively cultivated for fruits. E

C.annum L.ஊசி மிளகாய் Herb; fl white. Several cultivars are recognised. E

Datura innoxia Mill. (D.metal auct. non L.). Shrub, branchlets pubescent; fl white;fruit globose, covered with slender sharp spines. Common weed in]foothills and plains. E

D.metal L. ஊமத்தை Shrub, branchlets glabrous.fi white with purple tinge.fr short, stout, blunt spines. Common in plains & foothills. E

Lycianthes laevis (Dunal) Bitter subsp. **laevis** (*Solanum laeve* Dunal). Straggling undershrub, fl.white. Common in foothills.

L.laevis (Dunal) Bitter subsp. **kaitisis** (Dunal) Deb *(Solanum denticulatum* auct. non Blume). A rigid shrub; fl white. Common in hills.

Lycopersicon esculentum Mill. Pubescent herbl fl yellow; fr globose depressed.

Cultivated for fruits. E

Physalis minima L. (incl.var.**indica** Clarke) சொடக்குத்தக்காளி. Herb, fr up to 1 cm across. Common weed along roadsides and wastelands.

P.peruviana L. பெருங்குன்னி.. Erect herb; fl yellow with deep purple spots on the throats of corolla.Common in hills. E

Solanum anguivi Lam. var. multiflora (Roth ex Roem & Schultes) Chithra *(S.Indicum* Var. *multiflora* (Roth ex Roem & Schultes) Clarke. Large prickly herb; fl white. Common in hills.

S.erianthum D.Don மலைசுண்டை. Large shrub or small tree; fl white; ripe fr yellow. Common in hills. E

S.giganteum Jacq. புதர் சுண்டை. Thorny shrub with grey pubescent; fl violet; fr red. Common in hills.

S.melongena L.var.**melangona** கத்தரி. Shrub; fl white. Cultivated for fruits, used as vegetable. E

S.nigrum L. மனத்தக்காளி Erect annual herb, fl white; fr green, mature bluish black.Cultivated for its leaves, used as vegetable. E

S.pubescens Willd. Shrub; branchlets fulvous tomentose, fl purple to violet, fr mature orange. Common in foothills.

S.stramoniifolium Jacq. Stout, erect prickly herb; fl white. Common in hills.

S.surattense Burm.f. (=S.*xanthocarpum Schrader* & Wendl.)கண்டங்கத்திரி. Thorny shrub; fl purple; fr yellow. Common in wastelands and foothills.

S.torvum Sw. சுண்டைக்காய் Armed shrub; fl white. Cult. for its fruits in plains and foothills. E

S.trilobatum L. துருவாளி. Very prickly trailing or climbing undershrub; fl purple. Common in scrub forests. E

S.vagum Heyne ex Nees. Glabrescent undershrub; fl white; fr red. Rare in hills.

S.viarum Dunal. Thorny shrub; fl cream; mataure fr yellow. Common in hills.

Withania somnifera (L.) Dunal அமுக்கிரா. Shrub; fl yellow; mature fr orange.Introduced, run as a weed. E

SCROPHULARIACEAE (FTN 2: 118-128)

Adenosma indianum (Lour.) Merr. Erect herb; fl blue. Common in wastelands and paddy fields.

Bacopa monnieri (L) Rennell *(Moniera cuneifolia* Michaux) நீர்பிரம்மி. Succulent

creeping herb; fl white with violet bands. Common in wet places.E

Dopatrium junceum (Roxb.)Buch.-Ham. ex Benth. Erect slender fleshy herb; fl pink. Common in wet places, ponds and rice fields.

D.nudicaule (Willd.)Benth. Slender herb; fl pink. Common along coasts.

Limnophylla aromatica (Lam.) Merr. *(L.gratissima* Bl.) Tall stout aromatic herb; fl pink. Common in paddy fields and wet places. E

L.heterophylla (Roxb.) Benth. Tall erect herb; fl solitary, axillary, violet. Common in wet places and rice fields.

L.indica (L) Druce (*L.gratioloides* R. Br. and *L.racemosa* Benth.) Herbs; lvs two types; dissected lvs below water, normal lvs above water; fl yellow. Common in rice fields, swamps and pools. E

Lindernia anagalis (Burm.f.) Pennell *(Vandellia pedunculata* Benth.) Creeping herb; fl violet. Common in wet places & rice fields.

L.antipoda (L) Alston *(Illysanthes veronicifolia* (Retz.) Urban) தண்ணிபூண்டு.. Herb; fl blue. Common in swampy places.

L.caespitosa (Blume) Panigrahi *(Vandellia scabra* Benth. incl.var.) Diffuse herb; fl white. Common in rice fields.

L.ciliata (Colsm.)Pennell *(Illysanthes serrata (*Roxb.) Urban). Erect herb; fl white with pink throat. Common in wet places.

L.crustacea (L) F.v.Muell. *(V.crustacea* (L) Benth.) Herb, glabrous or pubescent; fl rose-purple. Common in wet places, rice fields or in gardens.

Sopubia delphiniifolia (L) G.Don var. delphiniifolia. Herbs, often purple; fl purple Common in hills, rocky slopes, fields and grassy slopes.

Stemodia viscosa Roxb. Much-branched aromatic, viscid-pubescent herbs; fl blue.Common in wet places. E

Striga angustifolia (D.Don)Saldanha *(S.euphrasioides* Benth.) Erect herb; fl white.Common in wet places; parasite on grasses.

S.asiatica (L) Kuntze var. **asiatica** *(S.lutea* Lour) Parasitic herbs; fl white or yellow. Common in wet places. grass-root parasite. E

S.gesnerioides (Willd.)Vatke (*S.orobanchoides* (R.Br. ex Ednlicher) Root parasitic herb; fl white. Common in wet places.

Torenia bicolor Dalz. A small trailing herb; fl blue-violet or white. Common in marshy areas.

T.courtallensis Gamble. Trailing herb; fl blue. Common along water course in deciduous forests.

T.hirsuta Willd. Stout hirsute herb; fl blue. Common in marshy areas.

OROBANCHACEAE (FTN 2: 128-129)

Aeginetia pedunculata Wall. Root parasite on grasses; fl orange. Common in grasslands.

Christisonia bicolor Gard. Root parasite especially on Acanthaceae members; fl yellow.Rare in evergreen forests.

C. neilgherica Gard. *(*Campbellia cytinoides Wight). Parasitic fleshy herb, plant yelow. Rare in higher altitudes.

C.subacaulis Gard. Parasitic herb; fl white. Rare in hills.

C.tubulosa (Wight) Benth. ex Hook. f. Tall parasitic herb; fl pink. Rare in bamboo forests.

LENTIBULARIACEAE (FTN 2: 129-131)

Utricularia aurea Lour. Aquatic herbs; fl yellow. Common in marshy places.

U.caerulea L. Erect herb; fl white-blue. Common in marshy areas.

U.exoleta R. Br. A floating herb, sometimes rooting at nodes; fl yellow. Common in swampy areas.

U.graminifolia Vahl *(U.smithiana* Wight, *U.squamosa* Wight). Slender herb; fl bluish purple. Common in bogs and wet places.

U.minutissima vahl. Herb; fl pinkish red. Common in marshy places.

U.polygaloides Edgew. *(U.st ricticaulis* (Koen.ex Oliver) Stapf ex Gamble) Wet sandy soils. Thick stemmed herb, fl. blue. Common in wet places.

U.roseo-purpurea Stapf ex Gamble. Erect herb; fl pink. Common in wet places.

U.scandens Benj. *(U.wallichiana* Wight). Slender twiner; fl yellow. Common in marshy or wet places.

U.striatula J.E. Smith. Epiphyte or lithophytic herb; fl white. Common in marshy places.

GESNERIACEAE (FTN 2: 131-134)

Aeschynanthus perrottetii A. DC. incl. vars. *A.planiculmis* (Clarke) Gamble. Epiphytic undershrubon tree trunks; fl bright red with purple lines or spots. Common in evergreen forests.

Didymocarpus gambleanus Fischer *(D.Lanuginosus* (Clarke) Gamble). Scapigerous herbwith thick cinnamomeous tomentose leaves; fl blue. Not common in evergreen forests.

D.innominatus Burtt. *(D.rottleriana sensu* Clarke). Large scapigerous herb; fl. purple. Common in rocky slopes.

D.ovalifolia Wight. Herb on shady moist places; fl blue-yellow. Rare in evergreenforests.

D.repens Bedd. Creeping herb; fl blue. Common in moist shady places.

D.tomentosus Wight Scapigerous herbs; fl blue. Common in rocky slopes.

Rhychoglossum notonianum (Wall.)Burtt *(Glugia notoniana* (Wall.)A.DC.) Succulent herb; fl blue. Common in hills.

Rhynchotechum permolle (Nees)Burtt *(Isanthera permollis* Nees) Undershrub; fl.white. Rare in moist evergreen forests.

BIGNONIACEAE (FTN 2: 134-137)

Dolichandrone atrovirens (Heyne ex Roth) Sprague பூம்பத்திரி. Medium tree; fl white. Common in deciduous forests. E

D.falcata (Wall. ex DC.) Seem. காட்டுவர்சனா Tree; fl white. Common in dec. forests, often on rocky slopes.

Radermachera xylocarpa (Roxb.)K. Schum. வேடன்குரனி Large dec. tree; fl white with yellow tinge. Common in deciduous forests.

Stereospermum colais (Buch.-Ham. ex Dillw.)Mabberley var. coalis (S.*tetragonum* DC.) வேளைபத்திரி. Large tree; fl yellow; fr twisted. Common in deciduous forests.

S.colais (Buch.-Ham ex Dillw.) Mabberley var.angustifolium (Haines)Chandrasekaran (S.*angustifolia* (Haines) Haines Small tree.

Tecoma stans (L) Kunth (*Bignonia stans* L., *Stenolobium stans* (L) D.Don சொர்ணபட்டி Shrub; fl golden yellow, showy. Cult. in gardens. E

PEDALIACEAE (FTN 2: 137-138)

Pedalium murex L.பெருநெருஞ்சி Succulent herb; fl yellow; fr spiny. Common in waste lands. E

MARTYNIACEAE (FTN 2: 138)

Martynia annua L. Sticky herb; fl purple with yelow throat. Common in wastelands.E

ACANTHACEAE (FTN 2: 138-162)

Andrographis alata (Vahl)Nees. Succulent; fl white with purple streaks. Common in plains & foothills.

A.atropurpurea (Dennst.) A.Alston *(A.wightiana Arn.* ex Nees) Slender herb; fl pink with reddish purple lower lip. common in evergreen forests.

A.ceylanica Nees Slender herb; fl pink. Rare in evergreen forests.

A.elongata (Vahl) T.And. Erect herb; branches & infl. divaricate. Not common in hilly tracks.

A.neesiana Wight var. **neesiana.** Shrubs; fl brownish purple. Common in the margins of sholas & banks of streams.

A.paniculata (Burm.f.)Wall.ex Nees நிலவேம்பு Subshrub; fl white with pink tinge. Planted in houses as a putative snake Orepellent.

A.rothii Clarke. Straggling undershrub; fl pale yellow with larfge purple blotches. Rare in hilly tracks.

A.serpyllifolia (Roth ex Vahl) Wight. Trailing procum,bent herb; fl pale with purple blotches. Common in plains & foothills.

A.viscosula Nees. Much-branched woody undershrub; fl lilac with few dark streaks. Not common in hilly tracks.

Asystasia chelonoides Nees. Herb; lvs membranous; fl purple. Common in wastelands.

A.gangetica (L) T.And. Herbs; fl yellow.Common in wastelands. E

A.travancorica Bedd. Large shrub. Not common in hills.

Barleria acuminata Nees. Bushy shrub; lvs velvetty tomentose; fl white tinged blue or purple.Common in lower altitudes.

B.buxifolia L. Small prickly, hairy shrub. Fl. pink or white. Comon in wastelands.

B.courtallica Nees. Shrub fl. blue. large. Rare in forest areas. E

B.cuspidata Heyne ex Nees. Small prickly shrub; fl white, yellow or fawn-coloured. Common in scrub forests.

B.longiflora L.f. Shrub; fl.white,long. Common in dry forests. E

B.mysorensis Heyne ex Roth. Small prickly shrub; fl blue. Common in dry forests.

B.nitida Nees. Shrub or herb; fl white. Common in foothills.

B.pilosa Wall ex Nees. Small, softy, pilose undershrub; fl blue. Common in hilly tracks.

Blepharis madraspatensis (L:) Heyne ex Roth *(B.boerhaviaefolia Pers.)* Undershrub; fl blue or pink. Common in dry areas but usually in shady places.

B.repens (Vahl) Roth (*Acanthus repens* Vahl) (*B.molluginifolia Pers.)* Prostrate wiry herb; fl blue. Common in coastal areas.

Crossandra infundibuliformis (Nees) (*C.undulaefolia Salisb.)*கனகாம்பரம் Undershrub; fl orange to scarlet. Foothills & plains.

Dicliptera foetida (Forssk.) Blatter *D.zeylanica* Nees). Herb; fl rose-coloured.Common in hilly tracks.

Diotacanthus albiflorus (Bedd.) Benth. Shrub; fl blue, Common in evergreen forests

D.grandis (Bedd.) Benth. ex Clarke. Large shrub; fl blue. Common in moist evergreen forests.

Dipteracanthus patulus (Jacq.) Nees *(Recellia patula* Jacq.) Small undershrub; fl blue. Common in wastelands.

Ecbolium viride (Forssk.) Alston var. **viride** (E.*linneanum* Kurz)நீலாம்பரி. Low shrub; fl bluish-green. Common in low lands.

E.viride (Forssk.) Alston var. **laetevirens** (Vahl) Raizada (*E.Linnaeanum* Kurz var.

latevirens (Vahl) Clarke. Low shrub; fl yellow. Common in plains & lower altitudes.

Eranthemum capense **L.var.** capense (*E.montanum* Roxb.) Small shrub; fl pink. Rare in deciduous forests.

Goldfussia tristis Wight *(Strobilanthes tristis* (Wight) T.And.) Erect shrub; fl blue. Not common in evergreen forests.

Gymnostachyum canescens (Nees) T.And. Glandular hairy shrub, fl green & yelow.Common in evergreen forests.

Hygrophila auriculata (Schum.) Heine *(Asteracantha longifolia* (L) Nees நீர்முள்ளி

Thorny hispid herb; fl blue. Common in plains wet places, rice fields and margins of tanks.

H.salicifolia (Vahl) Nees *(H.angustifolia* Cooke). Erect herb rooting at nodes; fl pale purple blue. Common in swampy places and along streams in plains.

Indoneesiella echioides (L)Sreemadh. *(Andrographis echioides* (:L) Nees) Erect herb with villous white hairs; fl pink or white with purple blotches. Common in plains.

Justicia adhatoda L.ஆடாதொடா Shrub with foetid smell; fl white, throat barred with red or yellow. Cultivated in plains.

J.betonica L. வேலிமூங்கில். Erect shrub; fl white. Common in plains, wastelands on hedge & shady places.

J.salsoloides T. And. Woody undershrub; fl pubescent. Not common in dry forests.

Lepidagathis barberi Gamble. Erect shrub much branched; stem white. Not common in hilly areas.

L.pungens Nees. Stiff much-branched small spinous shrub. Not common in plains.

L.spinosa Wight ex Nees. Stiff prostrate much-branched spinous shrub. Not common in plains.

Leptacanthus amabilis (Clarke)Bremek. *(Strobilanthes amabilis* Clarke). Large sticky shrub, stem jointed; fl pink. Not common in hills.

L.rubicundus Nees (*Strobilanthes rubicundus* (Nees) T.And.) Slender shrub; fl pink. Rare in evergreen forests.

L.wallichil Nees (*Dianthera wallichii* (Nees) Benth. ex Gamble. Erect herb; fl small, in branched panicles. Rare in evergreen forests.

Nilgirianthus barbatus (Nees) Bremek. *(Strobilanthes barbatus* Nees). Gregarious shrub; fl white. Not common in evergreen forests.

N.decurrens (Nees) Bremek. *(Strobilanthes decurrens* Nees) Herb, stem quadrangular; fl blue. Common in evergreen forests.

N.perottetianus (Nees) Bremek. (*Strobilanthes perrottetianum* Nees)., Large herb; fl pale blue. Common in hilly ranges.

N.punctatus (Nees) Bremek. *(Strobilanthes anceps* Nees var. *microstachya* Clarke) . Slender herb; fl white. Not common in hills.

N.wightianus (Nees)Bremek. *(Strobilanthes wightianus* Nees). Gregarious climber; fl pale blue. Common usually in grassland.

Peristrophe montana Nees. Erect undershrub, lvs & bracts coloured. Common in ever green forests in lower altitude.

P.paniculata (Forssk.)Brummit *(P.bicalyculata* (Retz.)Nees. Herb, hispid; lvs small, fl in spreading panicles. Common as weed in forests & wastelands.

Petalidium barberioides (Roth)Nees. Shrub; fl white or pale blue. Common from coast to deciduous forests.

Phlebophyllum spicatum (Roth) Bremek. var. spicatum *(Strobilantahes consanguiness* (Nees) T.And.) Large shrub; fl white or pale blue. Common in lower altitudes.

Pseuderanthemum malabaricum *(*Clarke) Gamble. Undershrub; fl white. Common in evergreen forests.

Rhinacanthus nasutus (L) Kurz *(R.communis* Nees) நாகமல்லி. shrub; fl.white, Common in wastelands and low forests. Often cult.

Rostellularia diffusa (Willd) Nees var. **diffusa** *(Justicia diffusa* Willd.). Slender herb with pale flower spikes. Rare in forests. E

R.japonica (Thunb.) Ellis *(Justicia simplex* D.Don) Softy hairy herb; fl pale pink or lilac. Common in hilly tracks.

R.latispica (Clarke) Bremek. *(Justicia latispica* (Clarke) Gamble) More or less undershrub, black when dry; fl lilac with white spots. Not common in hilly tracks.

R.procumbens (L) Nees *(Justicia procumbens* L) ஒட்டுபுல்லு. Slender diffuse herb; fl purple. Common in hilly slopes.

R.prostrata (Roth ex Clarke) Majumdar *(Justicia prostrata* (Roxb. ex Clarke)Gamble. Prostrate herb; fl pale pink. Common in sandy places near the coast.

Resellia tuberosa L. Herb; fl blue. Common in plains. E

Rungia apiculata Bedd. Slender undershrub; fl white with purple spots. Common in hills along streams & rivers.

Rungia latior Nees. Stout erect herb; fl white or blue. Common in hilly slopes.

R.parviflora (Retz.)Nees. Small herb; fl blue. Common in deciduous forests.

R.pectinata (L) Nees தவசு முருங்கை. Decumbent herb; fl blue. Common on bank of river & streams and grasslands.

R.repens (L) Nees கொடகாசாலை, Decumbent or erect herb; fl white. blue or pink. Common in evergreen forests. E

R.wightiana Nees. Under sbrubs; fl white, lower lip with lilac lines. Rare in evergreen forests.

Stenosiphonium russellianum Nees. Erect shrub; fl blue. Common in lower hills.

Xenacanthus pulneyensis (Clarke) Bremek Shrub; fl blue. Common in evergreen forests

THUNBERGIACEAE (FTN 2: 162-163)

Thunbergia grandiflora (Roxb. ex Rottl.) Roxb. Climber; fl blue. Grown in garden, run wild. E

VERBENACEAE (FTN 2: 163)

Callicarpa tomentosa (L) Murr. வெத்தலை பட்டை Small tree or shrub; fl pink. Common in the open forests. E

Clerodendrum inerme (L) Gaertn. பிஞ்சில் Stragling shrub; fl white. Common in coastal zones. E

C.paniculatum L. Plains. Bushy perennial herb or shrub; fl blue. Mostly cultivated.

C.serratum (L)Moon சிறு தேக்கு Shrub; fl bluish-purple. Common in exposed forests. E

C.viscosum Vent. *(C.infortunatum auct. non L)* பெருங்கிலாய் Large shrub or small tree; fl white. Common in plains & lower altitudes. E

Gmelina arborea Roxb. குமுளமரம்.Tree; fl brownish-yellow. Not comon in deriduous forests.

G.asiatica L. முன்குமிழ். Straggling shrub; fl yellow. common in plains & coasts. E

Lantana camara L. var. **aculeata** *(L.aculeata L.)* உன்னிச்செடி. Rambling shrub with short and recurved prickles; fl yellow. Common weed in deforested areas. E

L.camara L. var. **splendens** (Medic.)**Mold.** (L.crenulata Otto & Dietr.) Shrub; fl yellow. Common weed in disturbed forests.

L.indica Roxb. உன்னி. Erect unarmed shrubs; fl pink or purple. Common in disturbed forests.

Phyla nodiflora (L) Greene *(Lippia nodiflora* (L.Rich.) பொடுதலை. Prostrate herb; fl white. Common in wet places & grassy pastures.

Premna latifolia Roxb. முன்னை. Small trees, fl greenish white. Common in coastal & dry forests.

P.serratifolia L. முன்னை.Small tree or shrub; fl greenish yellow. Common in deciduous forests.

P.tomentosa Willd. மலை தேக்கு.Medium-sized tree; fl greenish yellow.Common in deciduous forests. E

P.wightiana schauer பிஞ்சா. Small tree or large shrub; fl white. Not common in hilly trackts.

Stachytarpheta jamaicensis (L) Vahl *(S.indica var. jamaicensis* (L) Trimen. Wetlands and roadsides. Tall herb; fl bluish-purple. Common in plains.

S.urticaefolia (Salisb.)Sims *(S.indica auct.* non (L) Vahl. Tall herb; fl blue. Introduced. Common in plains.

Svensonia hyderobadensis (Walp.)Mold. *(Bouchea hyder abadensis* Walp.) மைனாச்செடி. Tall shrub; fl pink-purple. Common in low hills.

Tectona grandis L.f. தேக்கு. Dec.tree; fl greenish-yellow. Rare in deciduous forests, but cultivated in plantations. E

Vitex altissima L.f. மைலா. Large tree; fl pale blue. Not common in deciduous forests.

V.negundo L. நொச்சி. Undershrub; fl violet. Common in plains, wastelands and bank of streams.

V.pinnata L. மைலாடி. large tree; fl white. Common in dec. forests. banks of streams.E

LABIATAE (FTN 2: 171-187)

Acrocephalus hispidus (L) Nicolson & Sadasivan *(A.indicus (*Burm.f.)Kuntze. Annual herb; fl pale purple. Common in fields and wastelands. E

Anisochilus carnosus (L.f.) Wall. ex Benth. கற்பூரவல்லி. Annual herb; fl purple. Common in plains & deciduous forests. E

A.scaber Benth. Erect or ascending herb, rooting at nodes. Not common in hills.

A.sericeus Benth. Undershrub. Not common in hilly tracks.

Basilicum polystachyon (L) Moench *(Moschosma polystachyum* (L) Benth சணக்கிபூண்டு. Slender annual herb; fl pale pink. Common in plains. E

Gomphostemma eriocarpon Benth. Slender herb; fl yellow. Not common in evergreen forests.

Leucas aspera (Willd.)Link. Herb; fl white. Comon in plains. E

L.biflora (Vahl)R.Br.var. **biflora.** Slender procumbent herb; fl white. Common in plains.

L.biflora (Vahl)R.Br.var. **procumbens** (Desf.) Gamble Herb; fl white. Common in plains.

L.cephalotus (Roth) Spreng. Erect stout herb; fl white.Common weed in fields. E

L.indica (L) R.Br.var. **indica** *(L.linifolia (*Roth) Spreng. மொசப்புல்லு Slender annual herb; fl white. Common in wastelands.

Ocimum gratissimum L. எலுமிச்சந்துளசி Much-branched shrub; fl white. Common in wastelands & plains E

O.tenuiflorum L. துளசி Erect much-branched shrub; fl white. Cult. in pots, pedestals, Hindu homesteads and temple, found run wild. E

Orthosiphon comosus Wight ex Benth. Handsome shrub; fl pale purple, Common in hills.

O.thymiflorus (Roth) Sleensen *(o.glabratus* Benth.) Erect herb; fl white. Common in wastelands E

Plectranthus amboinicus (Lour) Spreng. *(Coleus amboinicus)* கற்பூரவள்ளி fleshy shrub, strongly aromatic; fl pale purple. Cultivated and run wild.

P.barbatus Andr. *(Coleus barbatus* (Andr.) Benth Aromatic herb, fl blue. Common in hilly tracks. E

P.malabaricus (Benth.) Willemse *(Coleus malabaricum* Benth). Tall herb; fl pink. Not common in hills.

P.walkeri Arn Small herb; fl pink. Not common in hills, banks of streams & rivers.

P.wightii Benth. Tall herb; fl white. Common in grassy slopes.

Pogostemon pubescens Benth. Stout erect herb; fl pinkish white. Common in ever green forests. E

P.purpurascens Dalz. Herb; fl blue. Common in evergreen forests.

Scutellaria colebrookiana Benth. Herb; fl pinkish white. Common in hills.

S.violacea Heyne ex Benth. Straggling herb; fl pink. common in shady places in hills.

Teucrium tomentosum Heyne ex Benth. Herb; fl pale yellow.Common in lower altitude.

NYCTAGINACEAE (FTN 2: 188-189)

Boerhavia chinensis (L) Asch. & Schweinf. *(B.rependa* Willd.) Diffuse herb; fl pink. Common in plains & dry wastelands.

B.diffusa L. முக்குராத்தி Diffuse herb; fl red or pink. Common in wastelands. E

Pisonia aculeata l. முறுக்குகள்ளி. Dry forests. Thorny climbing shrub; fl greenish white. Common in lower altitude from coast.

P.grandis R.Br. முறுவால். Small tree; fl greenish white. Common in coastal forests, found in gardens.

AMARANTHACEAE (FTN 2: 189-194)

Achyranthus aspera L.var.aspera நாயுருவி Wastelands and road sides. Herb; fl pink. Common in plains. E

A.bidentata Blume. Erect herb; fl greenish white. Common in wastelands. E

Aerva lanata (L) Juss. ex Schultes சிறுபூளை Shrub; fl white, spike small. Common in dry lands. E

A.persica (Burm.f.)Merr. *(A.tomentosa* Forssk.) பெரும்பூளை Shrub; fl white. Common in wastelands.

A.wightii Hook.f. Shrub; fl white. Common in wastelands.

Allmania nodiflora (L) R.Br. ex Wight var. nodiflora incl. vars. dichotoma & aspera. Much branched herb. fl white. Common in wastelands.

A.nodiflora (L) R.Br.ex Wight var. **procumbens** Hook.f. Prostrate herb; fl white. Common in plains.

A.pungens Kunth. Herbs; fl pale pinkish white. Common weed of wastelands and roadsides.

Alternanthera sessilis (L) R.Br.ex DC. பொன்னாங்கன்னி. Prostrate herb; lvs used as vegetable; fl white. Common in wastelands. E

Amaranthus caudatus L. Tall herb; fl crimson. Cult. run wild. E

A.hybridus L. subsp. cruentus (L)Thell. var. paniculataus (L) Thell. *(A.paniculatus* L.) புங்கிகீரை. Tall herb; seds red or black. Cult. run wild. E

A.spinosus L. முள்ளுகீரை. Erect spinous herb; fl green. Common in wastelands. E

Celosia argentea L. Annual herb; fl white. Common among grasses and cultivation.

C.pulchella Moq. Slender diffuse herb. Not common in hills.

Cyathula prostrata (L) Blume. Slender decumbent herb, rooting at nodes; fl pale violet. Common from coast to ghats.

Gomphrena globosa L. Tall annual herb; fl white. Common in wastelands.

Pupalia lappacea (L) Juss. var. lappacea. Shrub; fl white. Common in wastelands to ghats. E

CHENOPODIACEAE (FTN 2:194-196)

Arthrocnemum glaucum (Del.) Ung.-Sternb. *(A.fruticosum Moq.* var. *glaucum* (Del.)Moq.)Tall erect shrub; coastal sandy salt marshes.

A.indicum (Willd.)Moq. பவளபூண்டு Prostrate herb; fl crimson red. Common in coastal sandy marshes.

Artiplex repens Roth. Undershrub. Common in coastal sandy places.

Basella alba L. var. **alba** பசலைக்கீரை. Succulent climbing herb; lvs used as vegetable. Cultivated for its leaves.

Basella alba L. var. rubra (L) J.L.Stewart சிவப்பு பசலைக்கீரை.. Succulent climbing herb; lvs used as vegetables. Cultivated. E

Salicornia brachiata Roxb. உவலிக்கீரை Erect shrub; spikes red. Common along costs.

Suaeda maritima (L) Dumort. உப்புக்கீரை. Woody, much-branched undershrub, densely covered with fl. Common along coastal salty marshy places E

S.monoica Forssk. ex Gmel. கருஉமரி. Small much-branched bushy shrub. Common in coastal areas. E

POLYGONACEAE (FTN 2: 196-200)

Polygonum barbatum L. ஆத்தரளி.Large herb; fl white. Common in wet places.

P.chinensis L. Rambling shrub; fl white or pink. Common in plains & hills E

P.glabrum Willd.ஆத்தரளி. Annual herb; fl pink or white. Common in wet places. E

P.pulchrum Blume *(P.tomentosum Willd.)*. Stout prostrate herb, rooting at nodes; fl white.Common in wet places. E

Rumex vesicarius L. சக்கான்கீரை. Herb.Lvs used as vegetable. Cultivated E

PODOSTEMACEAE (FTN 2: 200-201

Farmeria indica Wills. Lithophytic herb in running water. Not common. Indotristicha tirunelveliana Sharma, Karthik. & Shetty. Aquatic herb in running water, rhizome suberect. Rare in hills.

ARISTOLOCHIACEAE (FTN 2: 201-202)

Aristolochia indica L. கருடக்கொடி. Twiner on bushes; fl brownish-grey.Common in hills. E

A.tagala Cham. Twiner; fl greenish yellow. Common in hills. E

Thottea barberi (Gamble) Ding Hou *(Apama barberi Gamble)* Shrub; fl green cylindrical.Occasional in evergreen forests.

Thottea siliquosa (Lam.) Ding Hou *(Apama siliquosa* Lam.) Shrub; fl green; fr cylindrical green. Not common in evergreen forests. E

PIPERACEAE (FTN 2: 202-205)

Piper umbellata (L) Rafin. *(Hackeria subpeltata* (Willd.)Kunth. Large scandent shrub; fl green; fr green, mature black. Occasional in evergreen forests.

Peperomia dindigulensis Miq. Large herb on wet rocks or branches of trees; fl greenwhite. Occasional in evergreen forests.

P.portulacoides (Lam.)Dietr. Succulent hertb on rocks and tree trunks; fl.green/ white. Occasional in evergreen forests.

P.tetraphylla (Forst.f.) Hook.f. & Arn. Epiphytic or lithophytic herb; fl green. Occasional in evergreen forests. E

Piper barberi Gamble. Slender climber; lvs pinnately nerved; fl green. Rare in evergreen forests.

P.betal L. வெற்றிலை. Stout, perenial creeper, rooting at nodes. Cult. for its lvs.

P.hynaenophyllum Miq. Slender climber; fl green. Occasional in evergreen forests.

P.mullesua Buch. -Ham. *(P.brachystachyum* Wall. ex Hook.f.) Woody climber; fl green; fr green, mature black. Not common in evergreen forests.

P.nigrum L. மிளகு. Climber, perennial fl green; fr green, mature black. Cultivated in hills. E

P.Trichostachyon (Miq). C.DC. Large woody climber; fl green, mature black. Occasional in hills.

P.wightii Miq. Stout climber, stem smooth; fl green; fr green, mature black, occasional in evergreen forests.

CHLORANTHACEAE (FTN 2: 205)

Sarcandra chloranthoides Gard. *(Chloranthus brachystachya* sensu Hook. f. Shrub in moist forests; perianth absent.Vesseless dioct. Occasional in evergreen forests.

MYRISTICACEAE (FTN 2: 205)

Knema attenuata (Wall. ex Hook.f. & Thoms.) Walp. சோரப்பத்திரி. Tree; fl brown tomentose. Common in evergreen forests. E

Myristica dactyloides Gaertn. *(M.beddomei* King, *M. contorta* Warb.) காட்டு ஜாதிக்காய். Tree; fl brown tomentose. Common in hills. E

M.fatua Houtt. var. **mangifera** (Bedd.) Sinclair *(M.mangifica* Bedd.) Lofty tree,evergreen; fl rusty tomentose. Occasional in fields.

M.fragrans Houtt. ஜாதிக்காய்- Tree; cultivated for fruits.

LAURACEAE (FTN 2: 206-212. 1987

Actinodaphne campanulata Hook f. Shrub or tree; fl cream coloured. Occasional in hills.

A.malabarica Balakr.(A.hirsuta Hook.f.) Lofty tree in evergreen forests.

Alseodaphne semecarpifolia Nees var. semecarpifolia யாவரனை. Tree in evergreen forests. E

Alseodaphne semecarpifolia Nees var. **parviflora** Hook.f.) Small tree in evergreen forests.

Apollonias arnottii Nees. Medium tree in evergreen forests. E

Cinnamomum filipedicellatum Kosterm. *(C.gracile* Hook.f.) Shrub or small tree; fl cream-coloured. Occasional in evergreen forests.

C.macrocarpum Hook.f. இலவங்கப்பட்டை. Tree; lvs coriaceous, shining. Not common in evergreen forests. E

C.malabatrum (Burm.f.) Blume *(C.iners sensu* Gamble). Tree; fl creamish yellow. Common in evergreen forests.

C.verum Presl இலவங்கம் Medium-sized tree; fl creamish yellow. Common in evergreen forests. E

Cryptocarya bourdillonii Gamble. Tall tree; in moist evergreen forests.

Litsea bourdillonii Gamble. Tree fl white. Rare in evergreen forests.

L.coriacea (Heyne ex Meisner) Hook.f. பன்னிதழை Small tree; fl white. Rare in evergreen forests. E

L.deccanensis Gamble பெரும்பந்தலி. Medium tree, branchlets & lvs tawny pubescent. Common in hills. E

L.glabrata (Wall. ex Nees) Hook. f. ஓங்க கன்னி Tree in sholas; fl white. Berries red. Rare in evergreen forests.

L.laevigata (Nees) Gamble/ Tree, umbellula bracts grey silky. Occasional in evergreen forests.

L.ligustrina (Nees) Hook.f./ Small tree; fl greenish yellow. Common in evergreen forests.

L.venulosa (Meisner) Hook.f. Straggling shrub; fl white Occasional in evergreen forests.

L.wightiana (Nees) Hook.f. var. wightiana Large tree; lvs & branchlets tawny. Common in evergreen forests.

Neolitsea cassia (L) Kosterm. *(N.zeylanica* (Nees) Merr.) மொள்காசெம்பகப்பாலை. Tree; common in evergreen forests.

N.scrobiculata (Meisner) Gamble Tree; lvs long petioled; fl pale yellow. Rare in deciduous forests.

LORANTHACEAE (FTN 2: 215-219)

Dendropthoe falcata (L.f.) Etting var. **falcata** *(L.longiflorus. Desr. incl. var.* fulcata) புல்லுருவி.. Large parasitic shrub; fl bright red. Occasional in moist deciduous forests.

Helicanthus elastica (Desr.) *(Loranthus elasticus Desr.)* Danser அடங்கன். Parasitic shrub; fl greenish white. Occasional in low forests.

Helixanthera hookeriana (Wight & Arn.) Danser *(Loranthus hookeriana* Wight & Arn.) Parasitic shrub with minute tubercles. Not common in evergreen forests.

H.intermedia (Wight) Danser (*Loranthus intermedius* Wight) Parasitic shrub; fl red. Common in evergreen forests.

H.wallichiana (Schultes) Danser *(L.wallichianus* Schultes) Parasitic shrub; fl red. Occasional in evergreen forests.

Macrosolen parasiticus (L) Danser *(Loranthus loniceroides* L) Large parasitic shrub in evergreen forests.

Scurrula parasitica L. *(Loranthus buddleioides Desr.) Parasitic* shrub; fl red. Common in deciduous and evergreen forests.

Taxillus courtallensis (Gamble) Danser *(Loranthus courtallense* Gamble) Slender parasitic shrub. Not common in evergreen forests.

T.cuneatus (Heyne ex Roth) Danser *(Loranthus cuneatus* Heyne ex Roth) Parasitic shrub, bark grey; fl red Occasional in coastal areas.

T.tomentosus (Heyne ex Roth) Tieghem (*Loranthus tomentosus* Heyne ex Roth). Parasitic shrub, branchlets black; fl brown. Occasional in deciduous & evergreen forests.

Viscum articulatum Burm. f. var. articularum. Parasitic shrub; fl in cymes. Not common in deciduous forests.

V.heyneanum DC. *(V.verruculosum* Wight & Arn., *V.orbiculatum* Wight) Bushy parasitic shrub. Not common in higher altitudes.

V.ramosissimum Wight & Arn. Slender parasitic shrub. Common in hilly tracks.

V.trilobatum Talbot *(V.capitellatum* ***sensu*** Hook.f.) Small parasitic herb. Common in the hilly tracks.

SANTALACEAE (FTN 2: 219)

Osyris quadripartita Salzm. Decne *(O.wightiana* Wall. ex Wight) Shrub; fl yellow. Not common in evergreen forests.

Santalum album L. சந்தனம். Tree; semiparasite; fl. red. Cultivated. Wood valuable. E

Scleropyrum pentandrum (Dennst.) Mabberley *(S.wallichianum* (Wight & Arn.) Arn. Small tree; fl red. Occasional in evergreen forests.

BALONOPHORACEAE (FTN 2: 220)

Balanophora fungosa J.R. & G. Forst. subsp. **indica** (Arn.)Hanser var. **indica.** Parasitic herb., Occasional in evergreen forests.

EUPHORBIACEAE (FTN 2: 220-241)

Acalypha fruticosa Forssk. சின்னி Undershrubs with yellow glands, fragrant, Common in dry areas.

A.indica L. குப்பைமேனி. Erect herb; fl white. Common in wastelands. E

A.lanceolata Willd. Herbs; fl in spikes. Common in wastelands.

Actiphila excelsa (Dalz.)Muell. -Arg. Tree; fl yellow Occasional in evergreen forests.

Agrostistachys borneensis Becc. *(A.meeboldii* Pax & Hofm) Tree; fl white. Occasional in evergreen forests.

A.indica Dalz. Tree; fl white. Occasional in evergreen forests.

Baccaurea courtallense (Wight) Muell.--Arg. Small tree; fl red. Occasional in evergreen forests.

Blachia calycina Benth. Shrub; fl in clusters. Occasional in evergreen forests.

B.umbellata (Willd.)Baill. Shrub; fl in umbels. Occasional in evergreen forests.

Breynia retusa (Dennst.) Alston *(B.patens* (Roxb.)Rolf. Shrub; fl pale yellow. Common in lower altitudes. E

B.vitis-idaea (Burm.f.)Fischer *(B.rhamnoides* (Retz.) Muell.--Arg.காட்டு நிருரி. Shrub; fl. yellow. Common in deciduous forests. E

Bridelia crenulata Roxb. *(B.,roxburghiana* (Muell.--Arg.) Gehrm. முள்வேங்கை. Large tree; branchlets fulvous tomentose. Common in low altitudes.

B.retusa (L) Spreng. முள்ளுவேங்கை. Tree; fl brown. Common in deciduous forests. E

B.scandens (Roxb.)Willd. Large climbing shrub; fl greenish yellow. Common in plains & low altitudes.

Cleistanthus patulus (Roxb.)Muell. Arg. Small, tree in deciduous forests.

Croton bonplandianum Baill. Herb, fl creamy white; fr green. Common in wastelands.

C.lacciferus L. Shrub; lvs aromatic. Common in plains & deciduous forests. E

C.malabaricus Bedd. Medium sized tree; fl white. Common in low altitudes. E

C.zeylanicus Muell. -Arg. *(C.reticulatus* Heyne ex Muell. Arg.) Small tree; lvs with glands at base. Common in evergreen forests. E

Dimorphocalyx beddomei (Benth.) Airy Shaw 9*(Tritaxis beddomei* Benth.) Tree. fl white. Occasional in evergreen forests.

D.glabellus Thw. Tree; fl white. occasional in evergreen forests.

D.lawianus (Muell.-Arg.) Hook.f. Tree; fl white. Occasional in evergreen forests.

Drypetes longifolia (Blume) Pax & Hoffm. *(Cyclostemon macrophyllus* Blume) Tree; fr yellow. Occasional in evergreen forests.

D.malabarica (Bedd.) Airy Shaw *(Cyclostemon malabaricus* Bedd.) Tree; lvs & frts tomentose. Occasional in evergreen forests.

D.roxburghii (Wall.)Horusawa *(Putranjiva roxburghii Wall.)*காருபலா. Tree along river banks & shady valleys at lower altitude. E

Epiprinus mallotiformis(Muell. --Arg.) Croizat (Symphyllia mallotiformis Muell.Arg.) கருஞ்சிகாடா. Tree; fl pale green. Rare in evergreen forests.

Euphorbia antiquorum L.சதுரக்கள்ளி. Small tree; fl greenish. Abundant in plains & low hills. E

E.chamaesyce L. *(E.prostrata Ait.)* Prostrate herb. Introduced, a weed in gardens.

E.corrigioloides Boiss. Herb, rootstock stout; lvs in pairs with red blotches. Common in plains & wastelands.

E.geniculata Orteg. Herb.

E.hirta L. அம்மாம்பச்சரிசி. Prostrate or ascending herb; fl greenish. Common in wastelands & fields. E

E.indica Lam. *(E.hypersifolia* auct. non L.) Herbs; fl pale pink. Common lower hillsE

E.nivulia Buch. -Ham. நாககள்ளி. Small tree; fl white or rose. Common in rocky slopes & deciduous forests. E

E.rosea Retz. Prostrate herb; fl pink. Common in wastelands & fields.

E.rothiana Spreng. Herb; fl pink. Common in hills.

E.santapaui Henry. Small tree; cyathia greenish yelow. Occasional in higher altitude.

E.thymifolia L. சித்திரப்பாலாடை, Prostrate herb; fl white. Common in wastelands

E.tortilis Rottl. ex Ainslie **திருகு கள்ளி.** Herb; fl. white or pink. Common in plains.

Excoecaria robusta Hook.f. பால்மரம். Shrub or tree; fl yellow. Common in plains or coastal areas.

Fahrenheitis zeylanica (Thw.) Airy Shaw *(Ostodes zeylanicus* (Thw.)Muell.--Arg. Large tree; lvs with long petiole. Common in hilly slopes.

Givotia rottleriformis Griff. கொட்டைதனக்கு. Tree; fl in panicles, fulvous tomentose. Common in hilly regions.

Glochidion ellipticum Wight var. ellipticum. Tree; fl greenish yellow. Common in evergreen forests.

G.zeylanicum (Gaerth.) Juss. கும்பாம். Small tree; fl pale yellow. Common in evergreen forests. E

Homonoia riparia Lour. Shrub; fl in axillary spikes. Common along river banks. E

Jatropha curcas L. காட்டாமணக்கு. Shrub; fl greenish-yellow. Cultivated and naturalised. E

J.glandulifera Roxb.அதலி. Shrub; fl greenish yellow. Common in cotton soils.

J.maheshwarii Subram. & Nayar. Shrub; fl greenish yellow. Common in coastal areas.

Macaranga peltata (Roxb.) Muell.-Arg. வட்டக்கன்னி. Small tree; fl brownish in panitles. Common in secondary forests. E

Mallotus aureo-punctatus (Dalz.) Muell.--Arg. Shrub; fl pale yellow. Occasional in evergreen forests.

M.philippensis (Lam.)Muell. Arg. var. philippensis கப்லி Small tree; fl brick-red. Common in deciduous forests. E

M.resinosus (Blanco)Merr. (*M.muricatus (*Wight) Thw. Tree; fl yellow. Occasional in evergreen forests.

M.rhamnifolius Muell, -Arg. Shrub or small tree; fl greenish. Common in evergreen forests.

M.stenanthus Muell. --Arg. கருவிலாட்சி. Tree; branchlets flat; fl greenish yellow. Not common in evergreen forests.

Meineckia longipes (Wight) Webster *(Neopeltandra longipes) (*Wight) Gamble. Slender undershrub; bark white. Common in evergreen forests.

Micrococca beddomei (Hook.f.) Prain. Undershrub; fl white. Occasional in evergreen forests.

Phyllanthus amarus Schum. & Thonn. *P.(niruri* auct. non L.) கீழா நெல்லி. Erect herb; fl greenish yellow. Common in plains. E

P.emblica L. *(Emblica officinalis* Gaertn.) நெல்லி. Dec.tree; fl greenish yellow. Common in deciduous forests. E

P.fimbriatum (Wight)Muell.--Arg. *(Reidia fimbriata* Wight) Shrub; seeds hairy. Common in deciduous forests.

P.gardnerianus (Wight)Baill. Undershrub; fl pale yellow. Common in wastelands.

P.macrael Muell. --Arg. var. macraei Shrub; leaf orange ciliate. Rare in grasslands.

P.macrocalyx Muell. --Arg. *(Reidia macrocalyx (*Muell.--Arg.) Gamble. Much-branched undershrub; fl pale yellow. Not common in evergreen forests.

P.maderaspatensis L. Shrub; male fl fascicles, female solitary. Common in deciduous forests.

P.polyphyllus Willd. சிறு நெல்லி. Shrub or small tree in deciduous forests.

P.reticulatus Poir. *(Kirganelia reticulata* (Poir.) Baill. Shrub; fl in axillary clusters. Common in plains.

P.singampattiana (Sebastine & Henry) Kumari & Chandrabose *(Reidia singampattiana Sebastine* & henry). Shrub or small tree; fl greenish yellow. Occasional in evergreen forests.

Ricinus communis L. சிந்தாமணக்கு. Small tree; fl pale yellow. Cultivated and occasional in wastelands. E

Sauropus androgynus (L). Merr. Shrub; fl white. Common in moist foreests.

S.bacciformis (L) Airy Shaw *(Agyneia bacciformis* (L) Juss. Herb; lvs elliptic-obovate. Common in coastal areas.

Sebastiania chamaelea (L) Muell. --Arg. Herbs; fl greenish. Common in wastelands.

Securinega leucopyrus (Willd.) Muell.--Arg. *(Fluggia leucopyrus* Willd.) புலாஞ்சி. Large shrub; fr white. Common in dry areas.

Suregada angustifolia (Baill. ex Muell.--Arg.) Airy Shaw காக்காய்பாலை. Tree; fl pale yellow. Rare in evergreen forests.

BISCHOFIACEAE (FTN 2: 241)

Bischofia javanica Blume மிளாசதயன். Dec.tree; bark brown. wood red. Common in evergreen forests.

DAPHNIPHYLLACEAE (FTN 2: 241)

Daphniphyllum neilgherrense (Wight) K. Rosenth. Tree; fl yellowish green. Common in evergreen forests.

STILAGINACEAE (FTN 2: 242)

Antidesma acidum Retz.*(A.diandrum* (Roxb.) Roth) ஆசாரிப்புளி. Small tree; fl pale yellow. Common in evergreen forests.

A.alexiteria L. *(A.zeylanicum* Lam.)நொலைதழை. Tree; fl pale yellow. Not common in evergreen forests. E

A.bunius (L) Spreng. நொலையாரி. Tree; fl greenish yellow; fr reddish turning black when mature. Occasional in evergreen forests.

A.menasu (Tul.)Miq. ex Muell.--Arg. பால்ஈச்சை. Tree; fl pale yellow. Common in evergreen forests.

A.walkesi (Tul.)Pax & Hoffm. Shrub; fl pale yellow. Rare in evergreen forests.

URTICACEAE (FTN 2: 243-249)

Boehmeria glomerulifera Miq. *(B.malabarica* Wedd.). Shrub or small tree; bark greyish brown. Not common in evergreen forests.

Dendrocnide sinuata (Blume) Chew *Laportea crenulata* Gaudich.) ஒட்டாபிலாவா. Shrub or small tree; bark white. Common in evergreen forests.

Elatostemma acuminatum (Poir.)Brongn. Shrub; woody below. Not common in evergreen forests.

E.lineolatum Wight var. **lineolatum.** Undershrub; fl white. Common in evergreen forests.

E.lineolatum Wight var. **linearis.** Undershrub; fl white. Common in evergreen forests.

E.lineolatum Wight var - **netosum** Henry. Undershrub; fl white. Occasional in evergreen forests.

Laportea interrupta (L) Chew *(Fleurya interrupts* (L) Gaudich.). Herb; fl greenish. Common in lower altitudes. E

Pellionia heyneana Wedd. Herb; fl yellowish white. Common in evergrteen forests.

Pilea melastomoides (Poir.) Blume *(P.trinervia* (Roxb.) Wight. Succulent herb; fl reddish. Occasional in evergreen forests.

P.wightii Wedd. Flaccid herb; fl white. Not common in evergreen forests.

Pouzolzia bennettiana Wight var. **bennettiana.** Herb; fl greenish white. Common in evergreen forests.

P.bennettiana Wight var. **tomentosa** (Wight) Hook.f. Erect herb, villous tomentose; fl white. Common in evergreen forests.

P.wightii benn. var. **wightii.** Herb; fl reddish. Common along streams in evergreen forests.

P.wightii Benn. var. lawsoniana **Fischer.** Tall robust herb; fl pink. Rare in evergreen forests.

P.zeylanica (L) Benn. *(=P.indica* (L) Gaudich காலுருக்கி Hirsute herb; fl pale red. Common in evergreen forests. E

Procris crenata Robinson *P.wightiana* Wall. ex Wedd.) Succulent herb. in evergreen forests.

ULMACEAE (FTN 2: 249-250)

Aphananthe cuspidata (Blume) Planch. *Gironniera reticulata* Thw.)கொடிதானி. Buttressed tree; wood brown. Not common in evergreen forests.

Celtis philippensis Blanco var. **wightii** (Planch.) Soep. (C*Wightii Planch.)* வக்கனை. Tree; fl grey. Occasional in higher altitudes.

C.tetrandra Roxb. குவியா, அடா. Tree; wood greyish white. Common in hilly ranges. E

Trema orientalis (L) Blume அம்பராத்தி. Tree; fl pale green. Common in deciduous E

MORACEAE (FTN 2: 250-257)

Artocarpus communis Forst. சீமைபலா. Tree; fl greyish black. Occasional in lower altitudes. Cultivated.

A.heterophyllus Lam. பலா. Jacq tree. Tree; fl greyish black. Occasional in lower altitude. Cultivated. E

A.hirsutus Lam. காட்டுபலா. Tree; fl brownish. Common along rivers in evergreen forests. E

Dorstenia indica Wall. ex Wight. Herb or small shrub; fl greenish. Common in shady places of evergreen forests.

Ficus arnottiana (Miq.)Miq. கொடி அரசு. Large shrub on rocks; twigs yellowish. Common in rocky slopes. E

F.**benghalensis** L.var.**benghalensis.** ஆல்.. Tree; twigs red. Common in plains. E

F.callosa Willd.ஆல் Large tree; twigs verrucose & canescent. Common from coast to ghats.

F.dalhousiae Miq. கல்ஆல். Small tree on rocky ravins. Not common in lower altitudes.

F.exasperata Vahl *(F.asperrima* Roxb.) மரம்தின்னி அத்தி. Tree; figs yellowish red. Common in dry areas. E

F.nervosa Heyne on Roth var. nervoswa நீர்ஆல். Large tree; figs yellow. Not common along streams.

F.racemosa L. *(F.glomeratta* Roxb.) அத்தி, வெள்ளத்தி. Large deci. tree; figs yellowish reg. Common along streams and rivers. E

F.religiosa L.அரசு.Pipul tree. Large tree; fl yellow. Cultivated and planted for avenue. E

F.tinctoria Forst. f. subsp. **gibbosa** (Blume) Corner var. **cuspidifera** (Miq.) Chithra *(F.gibbosa* Blume var.*cuspidifera* (Miq.)King. Tree; figs green. Occasional in moist deciduous forests.

F.tajahela Burm.f. கல்ஆல். Large tree; figs greenish yellow. Common in moist deciduous forests.

F.virens Ait. var. lambertiana (Miq.)Raizada *(F.infectoria* Roxb. var.*lambertiana* (Miq.) King மலை இச்சி. Tree; figs yellow. Occasional in evergreen forests. E

Streblus asper Lour. பிரசு Tree. lvs wedge--shaped. Common in evergreen forests. E

HYDROCHARITACEAE (FTN 3: 1-3)

Halophila beccarii Asch. Slender submerged marine herb.

H.decipiens Ostenf. Submerged, slender, creeping marine herb.

H.ovata Gaudich. Slender marine creeping herb in shallow waters.

Hydrilla verticillata (L.f) Royle. Slender submerged, stoloniferous herb in water.

Nechamandra alternifolia (Roxb.)Thw. *(Vallisneria alternifolia* Roxb., *Lagarosiphon alternifolia* (Roxb.) Druce) Submerged herb in fresh water. Common.

Ottelia alismoides (L.)Pers. Flaccid semi-submergible herb.

Thalasia hemprichii (Ehrench.)Asch. Submerged perennial marine creeping herb.

Vallisneria natans (Lour.)Hara. Submerged stoloniferous herb in fresh water. Fl. on elongate spiral peduncles. (GIMP : 252)

ORCHIDACEAE (FTN 3: 3-27)

Aerides ringens (Lindl.)Fischer. Epiphytic herb; fl. pink or mauve.

Anoectochilus elatus Lindl. Terrestrial herb; lvs. dark green with golden nerves.

Aphyllorchis montana Reichb.f. Leafless saprophytic herb; fl. strtaw-coloured.

Brachycorythis lantha (Wight) Summerh. *(Phyllomphax obcordata* Schltr.) Terrestrial herb in grassland; fl.pink or purple.

Bulbophyllum agastyamalayanum R.**Gopalan & A.N.Henry**. Lithophytic herb; fl. dark purple. lip yellow. in umbels Rare in hills.

Bulbophyllum albidum (Wight) Hook. f. Pseudobulbous herb. Rare in hills.

Cheirostylis pamifolia Lindlk. Herb; fl. white.

Chrysoglossum maculatum (Thw.)Hook.f. Terrestrial herb, in hills.

Cymbidum aloifolium (L.) Sw. Epiphytic herb; fl. yellow with dark purple or maroon stipes. Common in hills.

Dendrobium heyneanum (Lindl. Epiphytic herb; fl. white, in hills.

D.microbulbon A.Rich. Pseudobulbous herb. Pseudobulbs crowded small, epiphyte on moss substratum, in hills.

D.nanum Hook.f. Small epiphytic herb. Common in hills.

D.nutans Lindl. Epiphytic herb; fl. golden yellow.Rare in hills.

D.wightii A.Hawkes & A.H.heller *(D.graminifolium* Wight) Epiphytic or lithophytic slender herbs; fl. white, in hills.

Disperis neilgherrensis Wight. Terrestrial herbs; fl. pink.

Eulophia epidendraea (Koen.) Schultr. Terrestrial herb. Pseudobulbs green, spikes slender. long. few-flowered. Not common in hilly slopes.

Gastrochilus calceolaris (Buch.-ham. ex J.E. Smith) D.Don *(Saccolabium pulchelum* (Wight) Fischer. Small epiphytic herb.

Habenaria decipiens Wight. Herb on grasslands; fl. white. Not common in higher altitudes.

H.longicornu Lindl. Terrestrial herbs; fl. white. Found in grassy slopes.

H.roxburghii Nicolson *(H.platyphylla* Spreng.) Terrestrial herb; lvs. large, flat on ground; fl. white. Rare in higher altitudes.

H.virens (Lindl.) Abeyw. *(H.barbata* Wight ex Hook.f.) Herbs on grasslands of higher altitude.

Liparis elliptica Wight *(L.viridiflora* auct. non Lindl.) Epiphytic herb, pseudobulbs small, elliptic; fl. pale green.

Luisia birchea Blume *(L.tenuifolia* auct.non Blume). Epiphytic herb; lvs long, terete; in hills.

Malleola gracilis (Lindl.)Schltr. *(Saccolabium gracile* Lindl.) Slender epiphytic herb, stem zig-zag. Rare in hilly areas.

Oberonia santapaui Kapadia *(O.lindleyana* Wight) Epiphytic herb. Racemes long. Rare in hilly ranges.

Pachystoma senile (Lindl.) Reichb.f. Terrestrial herb in grasslands. Found in hills.

Paphiopedilum druryi (Bedd.)Pfitz. Terrestrial herb; fl. golden yellow. Rare in hills.

Papilionanthe subulata (Koen.)Garay *(Aerides cylindricum* Lindl.) Epiphytic herb; lvs. terete. Not common in evergreen forests.

Peristylis aristatus Lindl. Slender terrestrial herb.

Pholidota pallida Lindl. (*=P.imbricata sensu Lindl.)* Epiphytic herb; fl. small, spike pendulous.

Schoenorchis filiformis (Wight) Schltr. *(Saccolabium filiforme* (Wight) Lindl.) Epiphytic herb; lvs slender, filliform. Not common in hilly areas.

Sirhookera lanceolata (Wight) Kuntze *(Josephia lanceolata* Wight)Perennial epiphytic herb. Found in higher altitudes. Epiphytic herb;Found in higher altitudes.

S.latifolia (Wight)Kuntze *(Josephia latifolia* Wight) Epiphyherb; lvs purple. Not common in hills.

Tainia bicornis (Lindl.) Reichb. f. Terrestrial herb; fl. greenish-white. Rare in moist evergreen forests.

Trias stocksii Benth. ex Hook. f. Tiny herb. Rare in hilly regions.

Vanda spathulata (L) Spreng. Long scandent herb; fl. yellow. Common in hills.

V.testacea (Lindl.) Reichb.f. *(V.parviflora* Lindl.) Epiphytic herb; fl. yellow with maroon patches. Common in hilly regions.

Zeuxine grailis (Breda) Blume *(Z.bhalteriFischer)* Terrestrial herb on humus soil. Not common in hilly areas.

Z.longilabris (Lindl.) Benth. ex Hook. f. Puberulous terrestrial herbs. Not common in hilly regions.

ZINGIBERACEAE (FTN 3: 27-30)

Alpinia abundiflora Burtt & Smith *(Amomum involucratum* sensu Fischer) Herb. Common in hilly slopes.

Amomum cannicarpum (wight) Benth. Herb; fl. yelow. Common in hills.

Curcuma neilgherrensis Wight. Rhizomatous herb; fl. bright yellow with bright pink bracts. Common in evergreen forests.

Elettaria cardamomum (L) Maton ஏலம். Perennial herb; fl. yellow.Common in hilly areas.

Globba ophioglossa Wight. Erect herb in marshy places. Common in hilly ranges.

Hedychium flavescens Garey ex Roscoe. Herb; fl. yellow. Common in hilly ranges.

COSTACEAE (FTN 3: 30)

Costus speciosus (Koen.) J.E.Smith கொட்டம். Succulent herb. Common in hilly ranges.

MARANTACEAE (FTN. 3: 30)

Schumannianthus virgatus (Roxb.) Rolfe பெரிய குகை வள்ளி Erect herb in evergreen forests.

MUSACEAE (FTN 30-31)

Musa paradisica L. வாழை. In extensive cultivation for its fruits. E

CANNACEAE (FTN 3: 31)

canna indica L. *(C.orientalis* Roscoe) Perennial garden herb with different colours and cultigens, run wild.

HAEMODORACEAE (FTN 3: 31)

Ophiopogon intermedius D.Don var. intermedius. Small herb. Not common in hilly ranges.

Peliosanthes testa Andr. subsp. **humilis** (Andr.) Jessop *(P.neilgherrensis* Wight, *P.courtallensis* Wight) Perennial robust herb. Rather rare.

AMARYLLIDACEAE (FTN 3: 32-34)

Crinum latifolium L. விஷமுங்கில் Herb; fl. white with pink tinges. Common in hilly areas. E

Pancratium triflorum Roxb. Herb; fl. white; lvs glaucous. Common in scrub forests.

AGAVACEAE (FTN 3: 34-35)

Dracaena terniflora Roxb. Straggling shrub; fl. white. Common in evergreen forests.

Sansevieria roxburghiana Schultes & Schultes f. மொட்டமஞ்சி Fleshy herb. Common in hilly ranges.

HYPOXIDACEAE (FTN 3: 35)

Curculigo orchioides Gaertn. நில பனை Herb; fl. yellow. Common from sea level to higher altitude.

C.trichocarpa (Wight) Bennet & Raizada *(Molineria finlaysoniana* Baker) Herb; fl. yellow. Occasional in hilly ranges.

DIOSCOREACEAE (FTN 3: 35)

Dioscorea oppositifolia L. கவலைக்கொடி Tuberous herb; fl. greenish yellow. Common in hilly ranges. E

D.pentaphylla l. செடுகுந்தி. Tuberous climber; lvs 3-5-foliolate. Occasional in hilly ranges. E

D.spicata Roth. Tuberous herb. Occasional in hilly ranges.

D.tomentosa Koen. ex Spreng. நால்வெள்ளிக்கிழங்கு. Tuberous herb; lvs 3-5-foliolate; oung parts tomentose. Not common in hilly ranges.

D.wightii Hook. f. Tclimber; lvs ovate, cordate at base. Rare in hills.

Trichopus zeylanicus Gaertn. subsp. **travancorica** (Bedd.) Burkill (*T.zeylanicus sensu* Hook.f.) Perennial herb; lvs sagitate; fl. maroon; fr. green mature dried brown. Occasional in low evergreen forests.

LILIACEAE (FTN 3: 37-41)

Aloe vera (L) Burm. f. சோத்துக்கற்றாழை. Shrub; lvs succulent. fl. orange, medicinal. Common in foot hills and scrub forests.

Asparagus racemosus Willd. தண்ணீர்விட்டான்கிழங்கு.Spiny climber; fl. white, fragrant; ripe fr. red. Common in hilly ranges.

Chlorophytum attenuatum (Wight) Baker. Rhizomatous herb. Common in hilly ranges.

C.heynei Rottl. ex Baker. Erect herb in moist shady places. Scape short, stout. Not common in hills.

C.laxum R.Br. Slender herb; lvs narrow; scape slender. Common in hills.

C.nimmon ii (Graham) *(C.orchidastrum* sensu Hook.f.) Tall herb in moist shady places.

Dianella ensifolia (L.) DC. Stoloniferous herb.

Dipcadi montanum (Dalz.)Baker va. madrasicum (barnes & Fischer) Deb & Dasgupta. Erect bulbous herb in moist places.

Gloriosa superba கண்வலிப்பூ. Scandent shrub on bushes; fl. red, showy. Mostly cultivated for tubers.

Iphigenia indica (L) A.Gray ex Kunth நீர்பனை. Herb; fl. white. Common in hilly moist places.

Lilium wallichianum (Schultes & Schultes f. var. **neilgherrensis.** (Wight) Hara *(L.neilgherrense* Wight)Tall bulbous herbv. Not common in hills.

Scilla hyacithina (Roth) Matbr. *(S.indica* (Wight) Baker நரிவெங்காயம் Scapigerous bulbous. in marshy places; fl. green E

Urginea indica (Roxb.) Kunth. Bulbous herb. Common in hills.

XYRIDACEAE (FTN 3: 42-43)

Xyris capensis Thunb. var. **schoenoides** (mart.) Nicolson (*X.schoenoides* Mart.) Slender erect herb in marshy places.

X.pauciflora Willd. Erect scapigerous herb in swampy areas.

COMMELINACEAE (FTN 3: 43-50)

Commelina benghalensis L. கானவாழை Slender creeping fleshy herb.

C.clavata Clarke Spreading herb.

C.ensifolia R.Br. *(C.undulata var. setosa Clarke)* Spreading herb. Common in hilly ranges.

C.erecta L. var. **erecta** *C.kuzii* Clarke). Spreading herb. Common in hilly areas.

C.forskalaei Vahl. Diffuse herb; growing in dry areas.

C.paludosa blume *(C.obliqua* Buch.-- Ham. ex D. Don) Spreading branched herbs.

Cyanotis arachnoidea Clarke var. arachnoidea. Prostrate villous herbs.

C.arcotensis R.Rao *(C.papilionacea* auct. non (L) Schultes & Schultes f. Annual hirsute herb.

C.papilionacea (L) Schultes & Schultes f. Decumbent herb; fl. blue.

C.pilosa Schultes & Schultes f. Decumbent herb with long spreading haris.

C.tuberosa (Roxb.)Schultes & Schultes f. Spreading herb.

C.villosa (Spreng.) Schultes & Schultes f. Fleshy herb, stem and leaves purple.

Murdannia dimorpha (Dalz.) Brueckner *(Aneilema dimorphum* Dalz.) Eherb.

M.edulis (Stokes) faden *(Aneilema scapiflorum* (Roxb.) Kostel Herb; lvs radical, linear- ensiform.

M.esculenta (Wall.ex Clarke) Raizada ex R.Rao & Kammathy *(Aneilema esculenta* Wall.ex Clarke) Tuberous herb.

M.glauca (Thw. ex Clarke) Brueckner *(Aneilema glaucum* Thw. ex Clarke) Herb; lvs broad, scape erect. Common in hilly areas.

M.japoinica (Thunb) Faden *(Aneilema lineolatum* Kunth) Tuberous herb, in hilly terrain.

M. juncoides (Wight) R. Rao & Kammathy *(Aneilema paniculatum* Wall. ex Clarke). Erect herb, leaf-sheaths crowded. Common in hills.

M.loriformis (Hassk.)R.Rao & Kammathy *(Aneilema nudiflorum R* Br.var.*terminalis* (Wight) Clarke) Robust herb.

M.spirata (L) Brueckner *(Aneilema spiratum* (L) R.Br.) prostrate herb. Common from sea level in higher altitude.

M. zeylanica (Clarke) Brueckner var. longiscapa (Clarke) R.Rao & Kammathy *(Aneilema zeylanica) Clarke var. Longiscapa* Clarke) Slender herb.

JUNCACEAE (FTN 3: 51)

Juncas prismatocarpus R.Br. Tufted herb in water-logged areas.

ARECACEAE (FTN 3: 51-54)

Arenga wightii Griff ஆலம்பனை. Tree abdout 5m tall; female fl. subglobose. Not common in hilly ranges.

Bentinckia condapanna Berry ex Roxb. கூந்தப்பனை.Tall palm. Rare in hilly slopes.

Borassus flabellifer L. பனை. Tall palm in drier parts. Toddy & tender nuts valued. E

Calamus brandisii Cecari ex Beccari & Hook.f. Slender scandent shrub. Rare in hilly areas.

C.pseudo - tenuis Beccari ex Beccari & Hook.f. Slender climbing shrub. Not common in evergreen forests.

C.rotang L. சுருள். Armed scandent shrub; fl. yellow. Cane value. Occasional in evergreen forests.

Caryota urens L. கூந்தப்பனை. Palm 10-20 m. tall. Mostly cultivated. E

Cocos nucifera L. தென்னைTall stout palm; fl. yellow; fr. kernal edible. Cultivated. E

Phoenix pusilla Gaertn. *(P.farinifera* Roxb.) இத்தி Small shrub. Common in plains.

Pinanga dicksonii (Roxb.)Blume. Slender palm up to 10 m tall. Not common in evergreen forests.

PANDANACEAE (FTN 3: 54)

pandanus fascicularis Lam. *(=p.odoratissimus L.f.)* தாழை. Branched shrub or small tree; fl. yellow, fragrant. Common in low elevation & plains.

TYPHACEAE (FTN 3: 59)

Typha angustata Bory & Chaub. சம்பு. Robust tall herb in swampy areas. Spikes brown. Culms per mats. Common in plains to hilly terrain.

ARACEAE (FTN 3: 54-59)

Acorus calamus (L) வசம்பு. Rhizomatous herb or shrub; rhizome medicinal. Common hills, cultivated in houses. E

Anaphyllum beddomei Engler. Tall herb. Not common in hills.

A.wightii Schott Slender tall herb, growing in hilly ranges.

Arisaema barnesii Fischer.Tuberous herb in shady places. Not common in hilly areas.

A.leschenaultii Blume பாம்புக்கொடி. Tuberous herb in shady places of hilly terrain.

A.tortuosum (Wall.) Schott காட்டுசேனை cormous herb. Varaible species.

Colocasia esculenta (L) schott *(C.antiquorum Schott)* சேப்பங்கிழங்கு. Rhizome erect, stout, edible, spathe yellow. Comon in hills and marshy places.

Cryptocoryne retrospiralis (Roxb.) Kunth. *(C.unilocularis* (Roxb.) Kunth. herb, rootstock creeping, spathe tube violet, growing on marshy places or on the banks.

Lagenandra ovata (L) Thw. Large aquatic herb; spathe dark brown.

Pistia stratiotes L. கொடிதாமரை, ஆகாசதாமரை. fresh water floating herb; fl. light yellow.

Pothos scandens L. Unarmed branched climbing shrub. Common in hilly ranges.

P.thomsonianus Schott. Unarmed branched climbing shrub. Common in hilly ranges.

Theriophonum fischeri Sivadasan. Small herb; lvs narrowly hastate, spathe ovate to abruptly acuminate. Rare in hilly ranges.

POTAMOGETONACEAE (FTN 3: 61-63)

Cymodocea rotundata Ehrenb. & Hempx. ex Asch. Submerged marine herb in tidal & subtidal zones on marshy. Sandy & rocky substrata.

Cymodocea serrulata (R.Br.) Asch. Magnus Submerged marine herb; leaf sheath pink, leaf tip serrulate.

Halodule uninervis (Forssk.) Asch. *(Diplanthera uninervis* (Forssk.)Asch.) Submerged marine herb; leaf tip tridentate.

Potomogeton nodosus Poir. Heterophyllous submerged herb; lvs floating, spike axillary, Common in ponds & lakes.

Syringodium isoetifolium (Asch.) dandy *(Cymodocea isoetifolia Asch.)* Submerged marine herb; lvs fleshy, terete.

ERIOCAULACEAE (FTN 3: 63-64)

Eriocaulon cinereum R. Br. *(E.sieboldianum* Sieb. & zucc. ex Steud. Herb; heads white turning black. Common in scrub forests and plains.

E.melaleucum Mart. Herb; heads white. Common in hilly ranges.

E.polycephalum Hook. f. *E.longicuspis* Hook.f. *polycephala* (Hook.f.) *polycephala* (Hook.f.) Fyson) Herb; heads white. Common in grassy slopes.

E.quinquangulare L. Herh; peduncles up to 20 cm long; heads white. Common in hilly swampy areas.

CYPERACEAE (FTN 3: 65-86)

Bulbostylis barbata (Rottb.) Clarke. Small slender annual herb. Common on the banks of rivers in hills.

B.densa (Wall.)Hand.--Mazz. *(B.capillaris* var. *trifida* (Nees) Clarke) Herb. stem setaceous. Common in open marshy places.

Carex baccans Nees. Herbs. Common in hills and wet places.

C.lenta D. Don. Perennial herb; rhizome short, woody. Common in hilly ranges.

C.maculata Boott. Perennial herb, rhizome small, woody, urticle subsessile. Common in moist places of hills.

C.phacota Spreng. Perennial tufted herb. Common in marshy places.

Cyperus arenarius Retz. Small stoloniferous herb. Common in coastal areas.

C.castaneus Willd. Small annual herb. Common in wetlands.

C.compressus L. Herb, stem tufted, variable in sie. Hills in grasslands.

C.cyperoides (L) Kuntze *(Mariscus sieberianus* Nees ex Clarke) Perennial herb in shady places in hills.

C.distans L.f. var. distans. Perennial herb, rhizome creeping, spikeletsw brown. Wetlands scrub forests.

C.exaltatus Retz. Large perennial herb; spikelets elongate. Common in wetlands.

C.halpan L. Perennial stoloniferous herb. roots reddish. Common in wetlands.

C.iria L. Annual or perennial herb. In open wet places and scrub forests.

C.kyllinga Endlicher (*C.monocephalus* Roxb.) Perennial chizomatous herb. Common along streams and wastelands.

C.laevigatus L. *(Juncellus laevigatus L. Clarke. Small herb. Common in marshy places.*

C.melanospermus (Nees) Valcken subsp. **melanospermus** (Kyllinga melanosperma nees) Perennial herb; rhizome slender, creeping; if sheath purplish red. Common in swampy areas.

C.paniceus (Rottb.) Boeckler *(Mariscus paniceus* (Rottb.) Vahl. Perennial herb. Common in open grasslands.

C.pilosus Vahl. Perennial herb, common in open wetlands.

C.rotundus L. subsp. **rotundus** கோரைக்கிழங்கு Perennial herb; rhizome short with long slender stolon ending with blackish tubers; spikes purplish brown. Common in wetlands.

C.squarrosus L. Small annual herb in sandy places.

Eleocharis dulcis (Burm.f.) Honschel *(E.plantaginea* (Retz.) Roem. & Schultes Perennial stoloniferous herb in wetlands.

E.geniculata (L) Roem. & Schultes *(E.capitata* R.Br.) Annual herb, stem tufted. Common in wetlands.

Fimbristylis argentea (Rottb.) Vahl. Glabrous annual herb; spikelets rounded. Common in wetlands.

F.bisumbellata (Forssk.) Bubani. Annual herb. Common in hills, river banks, sandy places.

F.complanata (Retz.)Link. perennial herb in swampy muddy areas.

F.consanguinea Kunth. Perennial herb in wetlands.

F.dichotoma (L)Vahl. Perennial herb in wastelands.

F.dipsacea (Rottb.) Clarke. Glabrous annual herb in muddy places.

F.ferruginea (L) Vahl. Perennial herb. Rhizome creeping; spikelets brownish pink. Common in marshy places.

F.schoenoides (Retz.)Vahl.Perennial herb; spikelets brown. Common in foothills & plains.

F.uliginosa Hochst. ex Steud. Erect small herb. Common in hills.

Hypolytrum nemorum (Vahl) Spreng. *(H.latifolium* Rich.) Robust, rhizomatous perennial herb; stems leafy, triquetrous; panicles terminal. Common in ponds & streams.

Lipocarpa sphacalata (Vahl.) Kunth *(L.triceps* (Roxb.) Nees) Perennial herb; rhizome short; spikelets reddish. Wetlands.

Rhynchospora corymbosa (L) Britton. Perennial herb, stem stout, triquetrous, Common in swampy areas.

Scirpus mucronatus L. Perennial herbs, rhizome short, stem stiff, erect. Common in marshy areas.

S.squarrosus L. Annual herb; stem erect, tufted. Common in sandy places.

Scleria lithosperma (L) Sw.var.**lithosperma**. Stem slender smooth. Common in foothills and plains.

S.lithosperma (L) Sw.var.**linearis** Benth. Perennial herb; nuts rugulose. Common in hills.

S.terrestris (L) Fassett *(S.cochinchinensis* (Lour.) Druce. Perennial herb; rhizome woody.Common in secondary forests.

GRAMINEAE (POACEAE) (FTN 3: 87-146)

Acrachne racemosa (Heyne ex Roem. & schultes ohwi காடுகப்பை. Tufted annual herb in wastelands fields.

Alloteropsis cimicina (L) Stapf. Annual herb, spikelets pinkish.Common in dec. forests and wastelands.

Andropogon pumilus Roxb. காவத்தம்புல்லு Slender annual herb. Common in foothills, dry areas on black-cotton soils.

Apluda mutica L. மண்டப்புல்லு Perennial herbs; spikelets purple. Hills. Common in hedges, along roadsides & waste places.

Apocopsis courtallensis (Steud.) Henrard. *(A.wightii* Nees ex Thw.) Densely tufted perennial herb.

Aristida adcensionis L. ஊசிபுல்லு. Annual, tufted wiry herbs, spikelets purple. "Common in scrub forests & slopes.

A.funiculata Trin & Rupx. Annual herbs; culms geniculate. Common in foothills.

A.hystrix L. Perennial herb, rootstock creeping. Common in scrub forests, river banks, open dry places.

A.setacea Retz. Tall perennial herb in scrub forests.

Arundo donax L. முதம்புல்லு.Reed-like; panicles straw-coloured. Common in river banks.

Axonopus compressus (Sw.)P.Beauv. A spreading perennial, introduced and naturalised.

Bambusa arundinacea (Retz.) Roxb. மூங்கில். Long thorny bamboo, up to 40 m Common in hills.

Bothriochloa bladhii (Retz.) S.T. Blake *(Amphilophis glabra* (Roxb.) Stapf. Culms geniculate. Hills.

B.foulkesii (Hook.f.) Henrard *(Amphilophis foulkesii (*Hook.f.) Fischer. Erect tufted herb; culms slender. Common along banks of rivers.

B.pertusa *(L)* A.Camus (*Amphilophis pertusa* (L) Nash ex Stapf.)க்காரைப்புல்லு.Slender perenial herb; spikelets purple. Common in foothills.

Brachiaria eruciformis (J.E.Smith) Annual herb. Common in hilly ranges.

B.mutica (Forssk.) Stapf. Leafy perenial; culms long, growing in moist places.

B.ramosa (L) Stapf சணம்புல் Herbs, in wastelands and fields.

B.reptans (L) Gard. & Hubbard *(Urochloa reptans* (L) Stapf சாணிப்புல். Herbs; spikelets purplish. scrub forests, weed in fields.

B.semiverticillata (Rottb.)Alston. Robust grass, found in foothills.

B.setigera (Retz.) Hubbard *(Urochloa setigera* (Retz.) Stapf. Leafy annual herb in shady places.

Cenchrus setigerus Vahl. Perennial herb.

Centotheca lappacea (L) Desv. Tall perennial herb in wetlands.

Chionachne semitores (Benth. ex Hook.f.) Henrard. Culms up to 2 m tall. Common in scrub forests.

Chloris barbata Sw. செவ்வருகுப்புல். A tufted perennial herb.

C.dolichostachya Lagasca. A herb, oftenin bushes and hedges.

C.montana Roxb. Perennial herb, rooting at nodes; spikelets cream to yellowish. Common in scrub forests.

Chrysopogon aciculatus (Retz.) Trin. Perennial herb in wastelands, roadsides, and banks of water sourses.

C.fulvus (Spreng.) Chiov (C.montanus) Trin ex Spreng.) Tall perennial herb in foothills, roadsides.

C.orientalis (Desv.) A.Camus. Perennial herb; rootstock creeping. Common in hills & plains.

C.Zeylanicus (Nees ex Steud.) Thw. Tufted herb in hills.

Coelachryopsis lagopoides (Burm.f.) Bor *(Elusine lagopoides* (Burm.f.) Merr.). Annual herb in moist places.

Coix lacryma-jobi L. Robust annual herb, rooting at lower nodes. E

Cymbopogon caesius (Nees ex Hook.f. & Arn.) Stapf காமாட்சிப்புல் Tufted aromatic perennial herb, stem woody at base. E

C.citratus (DC.) Stapf வாசனப்புல். Tufted perennial herb, cultivated for oil.

C.coloratus (Hook.f.) Stapf மணக்கரபுல் Tufted herb, aromatic.

Cynodon arcuatus J.S. Presl (*C.dactylon* (L) Pers. var. *intermedius* (Rang. & Tad.) Fischer. perennial herb.

C.dactylon (L) Pers. அருகம்புல். Perennial herbs; spikelets purple, in wastelands. E

Cyrtococcum longipes (Wight & Arn. ex Hook.f.) A.Camus. Perennial herbs in damp places.

C.muricatum (Retz.) Bor. Perennial herb.

Cyrtococcum oxyphyllum (Steud.) Stapf. Perennial herb. Common in shady moist places.

C.patens (L) A.camus. Tall perennial herb, on shady places, matting on the ground. Common in hills.

C.trigonum (Retz.) A.Camus. Herb; spikelets greenish. Common in hills & plains.

Dactyloctenium aegyptium (L) Willd. Herbs up to 60 cm tall. Hills. roadsides E

Dichanthium annualatum (Forssk.) Stapf. Herbs; spikelets purple. Common in hills, wastelands.

Dichaetaria wightii Nees ex Steud. Slender perennial herb in shady places.

Digitaria abludens (Roem. & Schultes) Veldk. *(D.pedicellaris* (Trin. ex Hook.f.) Prain. Tufted annual herb in hills.

D.ciliaris (Retz.) Koeler *(D.marginata* Link) Annual herb in hills in pastures, hedges and thickets.

D.longiflora (Retz.) Pers. Annual herb in wastelands.

D.setigera Roth. Annual herb, rooting at nodes.

D.tomentosa (Koen.ex Willd.) Henrard *(Panicum subeglum* Trin) Slender herb in hills.

Echinochloa colona (L) Link காரம்புல்லு.Tufted annual herb; rulms slender. In wetlands, paddy fields, sides of ponds & lakes.

E.crusgalli (L) P.Beauv. Annual herb in paddy fields & moist places.

E.frumentacea Link குதிரைவால்புல் Robust annual or perennial herb.

Eleusine coracana (L) Gaertn. ராகி. cultivated herbs.

E.indica (L) Gaertn. திப்பராசி Erect annual herb in moist places. Cultivated.

Enteropogon monostachyos (Vahl) Schum. ex Engler கன்னிப்புல்.Slender perennial herb.

Eragrostiella bifaria (Vahl.)Bor. Densely tufted perennial herb in wetlands.

Eragrostis aspera (Jacq.) Nees. Annual herb; spikelets bright pink, Common in hills.

E.atrovirens (Desf.) Trin. ex Steud. herb; spikelets black; found in wastelands.

E.Cilianensis (Abl.) Vign. Weed in cult. fields.

E.ciliaris (L) R.Br. Annual herb in dry places.

E.Ciliata (Roxb.) Nees. perennial herb. Spike cylindrical.

E.maderaspatana Bor. Tufted herb.

E.minor Host. Slender herb in cultivated and fallow lands.

E.nigra nees ex Steud. Perennial herb; spikelets dark grey.

E. nutans (Retz.) Nees ex Steud. perennial herb.

E.pilosa P.Beauv. Slender annual herb.

E.siparia (Willd.) Nees.Tufted perennial herb.

E.tenella (L)P.Beauv. var. **tenella** *(E.plumosa* (Retz.) Link). Tufted annual herb; culms slender, Common in scrub forests.

E.tremula (Lam.) Hochst. ex Steud. Herb.

E.unioloides (Retz.) Nees ex Steud. Herb; spikelets pink. Common in hills.

E.viscosa (Retz.) Trin. Tufted viscous herb.

Eulalia phaeothrix (Hack.) Kuntze. Erect herb, basal sheath with chocolate indumentum.

Halopyrum mucronatum (L) Stapf. உப்புகாரைப்புல்லு Tufted perennial herb in coastal regions.

Heteropogon contortus (L) P.Beauv. ex Roem & Schultes Tufted herb. Common in scrub forests. E

Imperata cylindrica (L) Raeusch. var. major (Nees) Hubbard ex Hubbard & Vanghan *(I.cylindrica* (L) Rausch. var. *koenigii* (Retz.) T.Durand & Schinz தர்பை புல்லு.Herbs; spikelets fluffy. Common in hills.

Isachne kunthiana (Wight & Arn. ex Steud.) Miq. Herb in hills, swampy places.

I.walkeri (Arn. ex Steud.) Wight & Arn. ex Thw. Tall perennial herb.

Ischaemum commutatum Hack. Herbs in hills.

I.indicum (Houtt.) Merr. *(I.aristatum sensu Fischer)* Tuffed perennial herb; spikelets green, in hills.

I.pilosum (Klein ex Willd.) Wight. Tall rhizomatous herb in hills.

I. timorense Kunth. Erect herb; culms slender in hills.

Manisuris myuros L. Tufted perennial herb in dry sandy areas.

Ochlandra travancorica Benth-ex Gamble ஓடை Erect reed-like bamboo in hills.

Ophiuros exaltatus (L) Kunth கினாங்குபுல். Leafy perennial herb in hills.

Oryza meyeriana (Zoll. & Mor.) Baill. var. **granulata** (Nees & Arn. ex Watt) Duist. *(O.meyeriana* sensu Fischer) Herb; xulms slender in hills.

Ottochloa nodosa (Kunth) Dandy. Tall perennial herb in hills.

Oxytenanthera monadelpha (Thw.) Alston *(O.thwaitesii* Munro) Reed-like subscandent shrub in hills.

Panicum antidotate Retz. நசியம்புல்லு. Perennial herb in sandy areas.

P.fischeri Bor. Perennial herb.

P.maximum Jacq. ஜினியோ புல். Fodder grass; cultivated, also naturalised.

P.miliaceaum L. சாமை.**Cult. for grains.**

P.psilopodium Trin. பட்டுபுல்லு. Annual herb in open grassy places.

P.repens L. Weed in fields.

P.gtrypheron Schultes. Wastelands and in field as weed.

Paspalidu flavidum (Retz.) A. Camus அரிசிப்புல்லு.

Paspalum conjugatum Ber. Perennial stoloniferous herb in moist shady places.

P.dilatatum Poir. Tall perennial herb. Introduced now naturalised.

P.Scrobiculatum I. Weed in cult. fields.

P.vaginatum Sw. Herbs in hills.

Perotis indica (L) Kuntze நரிவால். Prostrate slender herb; culms geniculate; glumes purple. Common in plains.

Phragmitis karka (Retz.) Trin. ex Steud. தர்பைபுல் Tall rhizomatous perennial herb in moist places.

Poganthemum crinitum (Thumb.)Kunth. Tufted herb in exposed and banks of streams.

Pseudoraphis spinescens (R.Br.) Vickery *(P.aspera* Pilger) Aquatic floating herb.

Rhynchelytrum repens (Willd.) Hubbar *(R.villosum* (Parl.) Chiov. Pretty herb; spikelets pink feathery. Introduced, now naturalised.

Rottboellia cochinchinensis (Lour.) Clayton *(R.exaltata L.f.) Tall perennial herb in moist places.*

Saccharum officinarum L. கரும்பு Tall herb. Cultivated for juice. E

S.spontaneum L. நாணல். Tall tufted perennial herb; spikelets purplish. Common in river banks.

Sacciolepis curvata (L) Chase. Small creeping herb; culms slender in marhy places.

S.indica (L) Chase. Herb in moist grassy places.

S.interrupta (Willd.)Stapf தண்டன்புல் Marshy or aquatic herbs.

Setaria verticillata (L) P.Beauv. Prostrate herb; ascending culms. Common in shady places.

Sorghum arundinaceum (Desv.) Stapf *(Sorghum stapfii* (Hook.f.) Fischer Annual herbs.

S.halepense (L) Pers. காட்டுசோளம் Rhizomatous perennial herb.

S.nitidum (Vahl.)Pers.

Spinifex littoreus (Burm.f.) Merr. ராவணமீசை Sand-binding grass. Common in sea-shores.

Sporobolus coromandelianus (Retz.) Kunth

S.indicus (L) R.Br.var. **diander** (Retz.) Jovet & Guedes *(S.diander* (Retz.) P.Beauv. Herb. Common in wastelands.

S.maderaspatanus Bor. Perennial herb in saline areas.

S.piliferus (Trin.) Kunth

S.tenuissimus (Schrank) Kuntze Perennial herb; culms slender. Common in sandy areas.

S.tremulus (Willd.)Kunth. உப்புரத்னம் புல்லு Perennial herb in moist places.

S.virginicus (L) Kunth. perennial herb; culms arising from woody base. Common in sandy areas.

Themeda cymbaria Hack. நொசியாபாலைபுல். Tall robust perennial herb.

T.triandra Forssk Perennial herb in open lands.

Trachys muricata (L.) Pers. ex Trin. வெண்ணைதிரட்டிப்புல்.Weed in cultivated fields and sea-shores.

Tragus roxburghii Panigrahi *(Lappago biflora* Roxb.) Tufted perennial herb.

Tripogon bromoides Roem. & Schultes. Tufted perennial herb in hilly ranges.

T.jacquomontii Stapf. Tufted perennial herb. Common in rocky areas & barren uplands.

Vitiveria zizanioides (L) Nash வெட்டிவேர். Densely tufted herb; roots aromatic.Common along margins of tanks & streams.

Zenkeria sebastinii Henry & Chandrabose. Decumbent perennial herb. Rare in hilly ranges.

CYCADACEAE

Cycas circinalis L. அவிஞ்சில். Evergreen palm-like tree. Rare in deciduous forests.

PODOCARPACEAE

Nageria wallichiana (Presl.) Kuntze *(Podocarpus wallichianus* Presl. Tall evergreen tree; wood aromatic. Rare in low evergreen forests.

APPENDIX - 4

FAUNA

FISHES : (PRIMARY FRESHWATER FISHES)

Order : Osteoglossiformes

Suborder : No topteroidel

Family : Notopteridae

1. **Notopterus notopterus** (Pallas)

Order : Cypriniformes

Family : Cyprinídae

Sub family : Cultrinae

2. **Salmostoma Clupeoides** (Block)

Sub family : Resborinae

3. **Danib aequipinnatus** (McClelland)
4. **Amblypharyngodon microplepis** (Bleeker)
5. **Esomos thermoicos** (Valenciennes)
6. *Parluclosoma daniconius* (Hamilton)
7. *Rasbora cauverii* (Jerdon)

Sub Family : Cobitidae

8. *Catla catla* (Hamilton)
9. *Cirrhinus reba* (Hamilton)
10. *Cirrhinus mrigala* (Hamilton)
11. *Cyprinus carpio* (Linnaeus)
12. *Labeo calbasu* (Hamilton)
13. *Labeo dero* (Hamilton)
14. *Labeo pangusia* (Hamilton)
15. *Labeo rohita* (Hamilton)
16. *Ctenopharyngodan idella* (Valenciennes)
17. *Puntius arulius (Jerdon)*
18. Puntius arullius tambraparnei Silas
19. *Puntius bimaculatus* (Bleeker)
20. *Puntius chola* (Hamilton)
21. *Puntius dorsalis* (Jerdon)
22. *Puntius filamentosus* (Valenciennes)
23. *Puntius mahecola* (Valenciennes)
24. *Puntius sophore* (Hamilton)

25. *Puntius ticto* (Hamilton)

26. *Puntius vittatus* Day

27. *Hypselobarbus curmuca* (Hamilton)

28. *Barbodes sarana subnasutus* (Valenciennes)

29. *Horalabiosa joshuai* Silas

Sub Family : Garrinae

30. *Garra mullya* (Sykes)

31. *Garra kalakadensis*

Family : Balitoridae

Sub Family : Ballitorinae

32. *Bhavania australis* (Jerdon)

Sub Family : Noemacheilinae

33. *Noemacheilus triangularis triangularis* Day

Family : Cobitidae

Subfamily : Cobitinae

34. *Lepidocephalus thermalis* (Valenciennes)

Order : Siluriformes

Family : Bagridae

35. *Mystus* blrrkeri *(Day)*

36. *Mystus montanus* (Jerdon)

37. *Mystus vittatus* (Bloch)

Family : Siluridae

38. *Ompok bimaculatus* (Bloch

39. *Heteropneustes Fossilis* (Bloch)

Order : Cyprinodontiformes

Sub order : Exocoetoidei

Family : Belonidae

40. *Xenentodon cancila* (Hamilton)

Sub order : Adrianchthyoidei

Family : Oryziidae

41. *Oryzias melastigma* (McClelland)

Sub order : Cyprinodontoidei

Family : Aplocheilidae

42. *Aplocheilus lineatus* (Valenciennes)

Family : Poecilidae

43. *Gambusia affinis* (Baird & Girard)

44. *Poecilla reticulata* (Peters)

Order : Perciformes

Family : Cichlidae

45. *Aplocheilus blocki* (Arnold)

46. *Etroplus maculatus* (Bloch)

47. *Oreochromis mossambica* (Peters)

Family : Gobiidae

48. *Glossogobius giuris* (Hamilton)

Family : Bolontidae

49. *Pseudosphromenus cupanus* (Valenciennes)

Family — : Channidae

50. *Channa gachua* (Hamilton)

Family : Mastacembelidae

51. *Macrognathus aral* (Bloch & Schneider)

52. *Macrognathus pancalus* (Hamilton)

53. *Mastacembelus armatus* (Lacepede)

AMPHIBIA

Order : Anura

Family : Ranidae

1. *Bufo melanostictus* Schneider

2. *Bufo microtympanum* Boulenger

Family : Microhylidae

3. *Microhyla oranta* (Dumerill & Bibron)

4. *Microhyla rubra* (Jerdon)

5. *Ramanella montana* (Jerdon)

Family : RANIDAE

6. *Micrixalus fuscus* (Boulenger)

7. *Micrixalus opisthorhodus* (Gunther)

8. *Micrixalus silvaticus* (Boulenger)

9. *Nannobatrachus beddomii* (Boulenger)

10. *Nyctibatrachus aliciae* Inger, Shaffer, Koshy & Bakde.

11. *Nyctibatrachus deccarensis* Dubois

12. *Nyctibatrachus major* (Boulenger)

13. *Rana aurantiaca* (Boulenger)
14. *Rana beddomii* (Gunther)
15. *Rana brachytarsus* (Gunther)
16. *Rana curtipes* Jerdon
17. *Rana cyanophylyotis* Schneider
18. *Rana keralensis* Dubois
19. *Rana limnocharis* Boie
20. *Rana malabarica* Tschudi
21. *Rana temporalis* (Gunther)
22. *Rana tigerina* Daudin
23. *Tomopterna breviceps* (Schneider)

Family : Rhacophoridae

24. *Philantus beddomii* (Gunthger)
25. *Philantus femoralis* (Gunther)
26. *Philantus nasutus* (Gunther)
27. *Philantus pulcherrimus* (Ahl)
28. *Philantus variabilis* *(Gunther)*
29. *Polypedates maculatus* (Gray)

Order : Gymnophiona

Family : Ichthyophidae

30. *Ichthyyophis longicephalus* Pillai
31. *Uraeotyphlus oxyurus* (Dumeril & Bibron)
32. *Uraeotyphlus malabaricus* (Beddome)

REPTILIA

Order : Testudines

Family : Emydidae

1. *Melanochelys trijuga trijuga* (Schweigger)

Family : Testudinidae

2. *Geochelone elegans* (Schoepff)

Order : Squamata

Suborder : Sauria

Family : Gekkonidae

3. *Cnemaspis cornata* (Beddome)
4. *Dravidogecko anamallensis* (Gunther)

5. *Hemidactylus lesohenaullti* Dum. & Bibr.

Family : Agamidae

6. *Sitana ponticeriana* Cuvier

7. *Calotes versicolor* (Daudin)

8. *Calotes grandisquamis* Guenther

9. *Calotes calotes* (Linn.)

10. *Calotes elliotti* Gunther

11. *Psammophilus dorsalis* (Gray)

Family : Chamaeleonida

12. **Chamacipo Zeylanicus** Laurenti

Family : Scincidae

13. *Mabuya macularia* (Blyth)

14. *Mabuya beddomii* (Jerdon)

Suborder : Serpentes

Family : Colubridae

15. *Elaphe heiena* (Daudin)

16. *Liopeltia calamaria* (Guenther)

17. *Oligodon travancoricus* (Beddome)

18. *Xenochrophis piscator* (Schneider)

19. *Amphiesma beddomei* (Gunther)

20. *Ahaetulla nasuta* (Lacepede)

21. *Ahaetulla disper* (Gunther)

22. *Ahaetulla pulverulenta* (Dum & Bibr)

Family : Elapidae

23. *Calliophis melanurus* (Shaw)

Family : Viperidae

24. *Hypnale hypnale* (Merrem)

25. *Trimeresurus macrolepis* Beddomes

26. Trimeresurus malabaricus (Jerdon)

WILD LIFE

The wild life of the district consists of the following species:-

Names of the Species

1. Bennet Macaque (Macaca radiata - Geoffroy)

2. Lion tailed Macaque (Macaca Silonus (Linnaeud)

3. The Common Langur or Hanuman monkey (presbytis entullus - Durfresene)
4. Nilgiri Langur (Presbytis johni - Fishcher)
5. Slender Loris (Loris tardigradus - Linnaes)
6. Cats - tiger (Panthera - tigris - Linnaeous)
7. Leopard or panther (Panthera bardus - Linnaeous)
8. Jungle cat (Pellas chaus Guldenstaedt)
9. Civet - The Small Indian Civel (Viverricula Indica - Desmarest) (Punugu Cat)
10. Mongoose - The Common mongoose (Hespestes Hespestes edwardsi - Geoffray)
11. Striped necked mongoose (Herpestes Vitticollis - Bennet)
12. Hyena - the striped hyena (Hyaena - hyena - Linnaeus)
13. Jackal (Canis aureus - Linnaeus)
14. Indian fox Vulpes bengalensis (Shaw).
15. Dhole or Indian wild dog (Cuon alpinus - pallas)
16. Bear - Sloth bear (Melursus Ursinus - Shaw)
17. Otter - Common Otter - (Lufra lufra (Linnaeus)
18. Plying fox (pteropus - giganteus) (Brownish)
19. Squirrels - The large brown flying squirrel - Phyllippensis (Elliot)
20. Indian giant Squirrel (Ratufa Indica (Erxleben)
21. The Indian porcupine (Hystrix Indica Kerr)
22. Indian Hare (Lepus nigricollis F.Cuvier)
23. Elephant - Indian elephant (Elphas Maximum Linnaeus)
24. Wild Cattle - The Gaur or - Indian Bison (Bos gaurus - H. Smith)
25. Goat - Nilgiris Tahr (Hemifragus hylocrius (Ogliby)
26. Antelopes - Black buck or Indian entelope (Antelope - Cervicapara - Linnaeus)
27. Deer - Sambar (Cervus Unicolor Kerr)
28. Chital or spotted deer (Axis axis - Erxleben)
29. Barking deer (Muntiacus Muntijak - Zimmermann)
30. Indian Chevrotain or Mouse deer (Traqulus meminnax) (Erxleben)
31. Indian wild bear - (Sus scrofa (Linnaeus)

AVI FAUNA

Avi fauna of the district is multifarious which includes 33 varieties of common birds, 11 varieties of birds common in ever green forests and 14 varieties migratory water birds. Following is an exhaustive list of birds commonly seen in the district.

(a) The birds commonly seen in deciduous forests are listed below:-

Serial number and Common name		Scientific name
1. The Tree Pie	--	Dendrocitta vagabunda (Latham)
2. The Jungle Babbler	--	Turdoides striatus (Dumont)
3. The Gold fronted Chloropsis	--	Chloropsis aurifrons (Temminck)
4. The Red vented Bulbul	--	Pycnonotus cafer (Linnaeus)
5. The Indian Robin	--	Sexicoloides fulicata (Linnaeus)
6. The Magpie-Robin	--	Copsychus saularis (Linnaeus)
7. The Grey Shrike	--	Lanitus excubior (Linnaeus)
8. The Black Drongo	--	Dicrurus admimilis (Bechstein)
9. The Ashy Wren -Varbler	--	Prinia socialis Sykes
10. The Golden oriole	--	Oriolus oriolus (Linnaeus)
11. The Brahminy Myna	--	Sturnus Pagodarum (Gmelin)
12. The Grey Vagtail	--	Motacilla caspica (Gmelin)
13. The Large Pied Vagtail	--	Motacilla maderaspatensis (Gmelin)
14. The Black bellied	--	Eremopterix grison (Scopoli)
15. The Purple Subird	--	Nectarinia asiatica (Latham)
16. The Pied Crested Cuckoo	--	Clamator Jacobinus (Boddaort)
17. The Crow Pheasant	--	Centropus sinensis (Stephens)
18. The Alexandrine	--	Psittacula eupatria (Linneaus)
19. The Roseringed Parakeet	--	Psittaculakrrameri (Scopoli)
20. The Roller	--	Co racias benghalensis (Linnaeus)
21. The Common King fisher	--	Alcedo atthis (Linnaeus)
22. The Palm Swift	--	Cypsiurus parvus (Lichtenstein)
23. The spotted Owlet	--	Athene brama (Temminck)
24. The Crested Serpent Eagle.	--	Spilornis cheela (Latham)
25. The Brahminy Kite	--	Haliastur indus (Boddaert)
26. The Common Parish Kite	--	Milvus migrans (Boddaert)
27. The Blackwinged Kite	--	Elanus caeruleus (Desfentaines)
28. The Common Green Pigeon	--	Treton Phoenicoptera (Latham)
29. The spotted Dove	--	Streptopelia chinensis (Scopoli)
30. The Little Brown Dove	--	Streptopelia senegalensis (Linnaeus)
31. The Common or Grey Quail	--	Coturnix coturnix (Linnaeus)
32. The Grey Patridge	--	Francolinus pondicherianus (Gmelin)
33. The Redwattled Lapwind	--	Vanellus indicus (Beddacrt)

(b) **The birds seen in evergreen forests are:-**

	Serial number and common name		*Scientific name*
1.	Laughing Thrush	--	Garrulax jerdonii
2.	Mountain thrush	--	Zoothere dauma
3.	Large Woodshrike	--	Tephrodormis virgatus
4.	Fairy Blue Bird	--	Irene puclla
5.	Yellow backed sunbird	--	Aethogya siparaja
6.	Spider hunter	--	Arachnothera longirostries
7.	Malabar Golden backed woodpecker.	--	Dinopium javanese
8.	Heart spotted woodpec	--	Hemicorcus canente
9.	Malabar Great Black Woodpeck.	--	Dryocopus javensis
10.	Nilgiri Speckled Piculet	--	Picumnus innominatus
11.	Blue beared Bee eater	--	Nyctyornis atherioni.

(c) **Water Birds**

There are quite a number of tanks and a few reservoirs within the division and they harbour variety of water birds. These birds are seen mostly during the period January to June. They are listed below:-

	Serial number and common name		*Scientific name.*
1.	Spotted billed or Grey Pelicon	--	Pelecanus Philippensis (Gmelin)
2.	Little Cormorant	--	Phalacrocorax niger (Vieillot)
3.	Darter or Snake-bird	--	Anhings rufa (Daudin)
4.	Spoonbill	--	Platales leucorodia (Linnaeus)
5.	Little Egret	--	Egretta garzetta (Linnaeus)
6.	Grey Heron	--	Ardea cinerea Linnaeus
7.	Cattle Egret	--	Bubulcus ibis (Linnaeus)
8.	Paddy Bird or Pond Heron	--	Ardeola grayii (Sykes)
9.	White Stork	--	Ciconia ciconia (Linnaeus)
10.	Painted Stork	--	Ibis leucocephalus (Pennant)
11.	Flamingo	--	Phocniceptorus roseus (Pallas)
12.	Cotton Teal	--	Nettapus coromandelianus (Gmelin)
13.	Little Grebe or Dabehick	--	Podiceps ruficollis (Pallas)
14.	Common Teal	--	Anas crecca (Linnaeus)

List of the Insects identified from Tirunelveli District

This list represents a small group of insects from Tirunelveli district, collected by the scientists of Southern Regional Station, Zoological Survey of India, Chennai. This includes Lepidotera (Butterflies) comprising 18 species; Heteroptera (Bugs) belonging to 26 species under 6 families and 11 subfamilies; Homoptera (leafhoppers) comprising 21 species and coleoptera (Weevils) belonging to 6 species which are listed below:-

I. Order : Lepitoptera

Family : Papilionidae		**Common Name**
Atrophaneura hector (L.)	-	The Crimson Rose
Graphium sarpedon (L.)	-	The Red Helen
Papilio polytes romulus Cr.	-	The common Mormon
Family: Pieridae		
Appoas pandione (Geyer)	-	The Spot Puffin
Eurema hecabe (L.)	-	The common Grass yellow
Family: Danaidae		
Danaus aglea (Stoll)	-	The Glassy Tiger
Danaus chrysippus (L.)	-	The Plain Tiger
Euploea core (Cr.)	-	The common Indian Crow
Family: Satyridae		
Melanitis leda ismene (Cr.)	-	The common Evening Brown
Ypthima baldus (F.)	-	The common Five-ring
Family: Nymphallidae		
Cyrestis thyodamus Bdv.	-	The common Map Butterfly
Precis lemonias (L.)	-	The Lemon Pansy
Precis orithya (L.)	-	The Blue Pansy
Vindula erota (F.)	-	The South Indian Cruiser
Family: Acraeida		
Acraea violae (F.)	-	The Tawny Coster
Family: Erycinidae		
Libythea myrrha Godart	-	The club Beak
Family: Lycaenidae		
Celastrina casna albidisca) (Moore)	-	The white-Disc Hedge Blue

II. Order : Heteroptera

Family : Pentatomida

Sub Family : Plataspidinae

Coptosoma Sp.

Sub Family : Scutellerinae

Chrysocoris purpureus Westw.

Scutellera nobilis Fabr.

Sub Family : Pentatominae

Agnoscelis nubila Fabr.

Eusarcocoris quttiger Thunb.

Halys dentatus Fabr.

Nezara viridula Linn.

Plautia fimbriata Fabr.

Sub Family : Teasarastominae

Tessaratina sp.

Sub family : Dinidorinae

Coridius janus (Fabr.)

Family : Lygaeida

Sub family **Lygaeinae**

Lygaeus militaris Fabr.

Graptostethus sp.

Family : Pyrrhocoridae

Sub Family : Pyrrhocorinae

Dysdercus cingulatus Fbr.

Family : Coreidae

Sub Family : Coreinae

Cletomorpha sp.

Homoeocerus sp.

Sub Family : Alydinae

Leptocorisa sp.

Riptortus sp.

Family : Reduviidae

Sub Family : Acanthaspidinae

Acanthaspis pedestris Stal

Sub Family : Piratinae

Catamiarus brevipennis Serville

Sub Family : Harpactorinae

Euagoras plagiatus Burm.

Irantha armipes Stal

Rhinocoris fuscipes Fabricius

Rhinocoris marginatus Fabr.

Sub Family : Ectrichodiinae

Guionius indictus Dist.

Haematorrhophus nigroviolaceus Reuter

Sub Family : Salyavatinae

Nudiscutella frontispina Murugan & Livingstone

Order : Homoptera

Family : Cicadellidae

Amrasca biguttula biguttula (Ishida)

Balclutha sp

Balclutha saltuella

Batrocomorphus sp

Cofana spectra (Dist.)

Deltocephalus sp.

Exitianus indicus (Dist.)

Hecalus sp.

Hecalus arcuatus (de Motsch.)

Hecalus porrectus (Walker)

Hishimonus sp.

Idioscopus clypealis (Leth.)

Idioscopus niveosparsus (Leth.

Kolla paulula (Walker)

Kolla unimaculatus Signoret

Neodartus acocephaloides Melich.

Nephotettix nigropictus Stal

Nephotettix virescens

Orosius albicinctus Dist.

Paternus sp.

Typhlocyba sp.

APPENDIX - 5

Normal and Extreme Rainfall of Tirunelveli

Station	No.of years of Data		Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.
Ambasamudram	76	a	72.9	39.3	49.6	66.0	46.8	30.9	25.7
		b	03.9	02.2	02.7	03.9	03.2	03.7	03.0
Ayyakudi	64	a	39.8	30.8	57.5	76.0	49.8	42.6	47.6
		b	02.6	02.6	03.2	05.4	03.9	05.5	05.9
Cheranmahadevi	29	a	38.7	31.4	17.6	39.8	21.2	06.5	08.1
		b	02.0	01.2	01.2	02.6	01.5	00.7	00.7
Kadayam	69	a	67.0	38.8	50.2	65.2	46.8	37.6	39.1
		b	03.5	02.0	02.9	04.3	02.9	04.1	04.0
Kadayanallur	76	a	43.5	35.4	56.4	70.6	46.9	33.6	34.
		b	02.1	01.8	02.7	03.7	02.7	02.8	02.9
Canadian Anicut	29	a	61.7	33.8	30.3	60.3	13.8	23.8	26.4
		b	03.1	02.1	02.4	03.7	03.2	03.1	03.5
Nanguneri	78	a	46.7	20.3	38.6	58.0	39.4	30.6	17.6
		b	02.9	01.7	02.6	03.8	03.0	02.8	02.0
Palayamkottai Obsy	80	a	43.6	27.4	29.9	64.3	39.1	10.1	08.8
		b	02.4	01.6	02.1	03.7	02.5	01.0	00.7
Radhapuram	79	a	24.3	15.4	28.6	53.4	34.9	50.2	38.0
		b	01.7	01.0	01.9	02.9	02.2	04.4	03.2

APPENDIX - 5 (Contd)

Aug.	Sep.	Oct.	Nov.	Dec.	Annual	Highest annual as % of normal & year**	Lowest annual as % of normal & year**	Heaviest Rainfall in 24 hours * Amount (mm)	Date
14.0	29.2	157.6	267.7	162.6	962.3	290	42	248.2	1931 Dec 10
01.5	02.3	008.3	011.7	007.6	054.0	(1914)	(1975)		
23.0	31.2	141.2	209.8	092.3	841.6	162	25	169.1	1978 Nov 01
03.0	03.1	009.1	010.8	005.5	060.0	(1925)	(1959)		
03.9	05.8	090.4	156.5	079.9	509.8	231	19	245.0	1977 Feb 19
00.3	01.1	005.5	008.1	004.1	029.2	(1979)	(1975)		
24.4	30.7	168.5	249.4	160.2	977.9	194	27	279.9	1923 Dec 17
02.5	02.5	008.2	011.2	006.6	054.6	(1914)	(1975)		
17.6	29.4	156.6	216.8	098.4	839.3	165	31	218.4	1925 Nov 09
01.8	01.8	007.7	009.1	004.4	043.5	(1914)	(1975)		
10.3	37.2	142.6	233.3	133.1	831.6	186	42	195.1	1963 Jan 09
01.6	02.6	007.4	011.2	066.9	050.8	(1970)	(1966)		
20.8	31.7	154.3	192.9	110.7	767.5	183	49	228.6	1958 Jun 29
01.5	02.3	008.4	010.2	005.9	047.1	(1902)	(1974)		
17.3	34.1	169 9	181.5	099.4	725.4	177	45	292.8	1963 Jan 09
01.0	02.2	008.1	009.1	005.2	040.0	(1914)	(1952)		
16.8	20.6	137.6	137.0	087.5	684.3	199	27	212.3	1925 Nov 09
01.5	01.5	006.9	008.9	003.9	040.6	(1925)	(1974)		

APPENDIX - 5 (Contd)

Station	No. of years of Data		Jan	Feb	Mar	Apr	May	Jun	Jul
Sankarankoil	79	a	35.9	35.2	41.1	74.1	45.4	010.1	017.1
		b	02.0	01.7	02.3	04.7	03.2	001.3	001.4
Sengottai	72	a	45.7	35.8	63.5	91.4	92.0	155.9	156.9
		b	02.6	01.9	03.6	05.7	05.0	011.3	011.0
Sivagiri	72	a	43.6	47.3	56.4	76.6	47.5	017.5	028.2
		b	02.0	02.1	03.1	04.3	03.4	002.1	002.6
Tenkasi	80	a	53.3	36.4	77.9	94.3	68.5	091.1	096.9
		b	02.9	02.2	03.7	05.4	03.8	007.8	007.6
Tirunelveli	66	a	44.4	28.4	28.9	65.3	41.4	010.2	007.9
		b	02.8	01.8	02.2	04.0	02.9	001.0	000.9
Kirnuram	57	a	46.3	22.6	26.3	40.4	13.6	003.9	003.4
		b	02.9	01.4	02.1	02.5	01.2	000.5	000.4
Manimuthar	27	a	75.7	45.1	47.4	70.7	51.9	036.4	045.1
		b	03.5	02.3	02.3	04.0	03.7	004.5	004.9
Tirunelveli District		a	48.9	32.8	44.4	66.7	45.32	036.9	037.5
		b	02.7	01.8	02.6	04.6	03.0	003.5	003.4

APPENDIX - 5 (Contd)

Aug.	Sep.	Oct.	Nov.	Dec.	Annual	Highest annual as % of normal & year**	Lowest annual as % of normal & year**	Heaviest Rainfall in 24 hours * Amount (mm)	Date
16.1	33.4	171.6	187.7	72.6	736.3	174	33	165.1	1940 Nov 03
01.3	02.6	008.6	009.6	04.3	043.0	(1979)	(1975)		
84.3	65.6	180.2	239.8	96.7	1307.8	156	46	269.2	1925 Nov 09
07.7	05.6	010.4	011.2	05.6	081.6	(1924)	(1959)		
24.7	41.1	192.2	239.8	82.7	897.6	174	35	317.5	1929 Oct 29
02.1	02.8	009.3	010.2	04.1	048.1	(1979)	(1975)		
42.2	43.7	186.3	245.6	120.8	1157.0	171	40	254.8	1925 Nov 09
04.2	03.5	009.6	011.3	005.9	067.9	(1972)	(1949)		
20.9	32.1	160.5	195.9	106.0	751.9	183	44	270.0	1873 Dec 16
01.2	02.1	008.4	009.9	005.7	042.9	(1974)	(1952)		
05.4	09.0	137.1	195.2	10.6.3	609.5	207	34	226.1	1914 Dec 01
00.5	00.9	006.1	009.3	005.1	032.9	(1914)	(1910)		
29.2	36.9	153.7	291.5	175.1	1058.7	159	50	213.4	1963 Jan 09
02.6	03.0	008.5	012.1	007.8	059.2	(1979)	(1956)		
23.2	32.6	156.3	217.5	111.5	853.6	174	58		
02.1	02.5	08.2	010.3	005.5	049.6	(1914)	(1975)		

(a) Normal rainfall in mm.
(b) Average number of rainy days (days with rain of 2.5 mm. or more)
* Based on all available data up to 1987
** Years of occurrence given in brackets

Source : Indian Meteorology Department, Pune

APPENDIX - 6

Frequency of Annual Rainfall in the District
(Data 1901 - 1980)

Range in mm.	*No. of years*	*Range in mm.*	*No.of years*
401 - 500	2	1001 - 1100	8
501 - 600	6	1101 - 1200	7
601 - 700	9	1201 - 1300	4
701 - 800	16	1301 - 1400	--
801 - 900	19	1401 - 1500	1
901 - 1000	8		

Source : Indian Meteorology Department, Pune

APPENDIX - 6 (Contd)

Mean wind speed (Km/h.)
Palayamkottai

January	*February*	*March*	*April*	*May*	*June*	*July*	*August*	*September*	*October*	*November*	*December*	*Annual*
8.0	7.4	6.5	6.3	8.6	13.8	16.2	15.8	11.5	7.8	6.0	7.8	9.6

Mean days with	*Jan.*	*Feb.*	*Mar.*	*Apr.*	*May.*	*Jun.*	*Jul.*	*Aug.*	*Sep.*	*Oct.*	*Nov.*	*Dec.*	*Annual*
Hail	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Thunder	0.0	0.0	0.8	2.4	2.0	0.4	0.2	0.4	1.4	2.0	1.2	0.2	11.0
Fog	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dust Storm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

APPENDIX - 6 (contd)
Normal Temperature and Relative Humidity
Palayamkottai

Month	*Mean Daily Maximum Temperature*	*Mean Daily Minimum Temperature*	*Highest Maximum ever recorded*		*Lowest Minimum ever recorded*		*Relative Humidity*	
							0830	*1720*
	°C	°C	°C	Date	°C	Date	%	%
January	31.0	22.0	35.9	1979 Jan. 16	18.5	1957 Jan. 08.	77	60
February	33.1	22.7	37.5	1976 Feb. 27	18.5	1967 Feb. 09.	76	54
March	35.3	24.3	41.7	1953 Mar. 30	19.3	1968 Mar. 29.	73	53
April	36.2	25.8	41.7	1956 Apr. 27	20.3	1975 Apr. 27.	70	58
May	37.1	26.8	42.8	1966 May. 09	16.3	1977 May. 09.	60	52
June	35.9	26.5	44.9	1965 Jun. 05	20.4	1960 Jun. 20.	58	52
July	34.9	26.1	41.9	1978 Jul. 01	19.3	1960 Jul. 18.	60	54
August	35.2	26.2	39.5	1976 Aug. 13	21.6	1968 Aug. --.	59	54
September	35.8	25.8	40.5	1967 Sep. 15	21.4	1979 Sep. 08.	60	54
October	34.0	24.8	39.4	1980 Oct. 17	17.9	1967 Oct. 30.	71	66
November	31.3	23.6	38.9	1975 Nov. 04	16.9	1967 Nov. 19.	79	72
December	30.3	22.6	36.1	1972 Dec. 01	17.6	1977 Dec. 30.	76	65
Annual	34.2	24.8					68	58

* Hours I.S.T.

Source :Indian Meteorology Department, Pune

APPENDIX - 7

Modified Mercally Intensity Scale (Abridged) Remarks

Class of Earthquake

I Not felt except by a very few under specially favourable circumstances.

II Felt only by a few persons at rest, specially on upper floors of buildings and delivately suspended objects may swing.

III Felt quite noticeably indoors specially on upper floors of buildings but many people do not recognize it as an earth quake; standing motor cars may rock slightly; and vibration may be felt like the passing of a truck.

IV During the day felt indoors by many, outdoors by a few, at hight some awakened, dishes, windows, doors disturbed; walls make creaking sound, sensation like heavy truck striking the building; and standing motor cars rocked noticeably.

V Felt by nearly every one; many awakened; some dishes, windows, etc., broken; a few instances of cracked plaster; unstable objects overturned; disturbances of trees, poles and other tall objects noticed sometimes; and pendulam clocks may stop.

VI Felt by all, many frightened and run outdoors; some heavy furniture moved; a few instances of fallen plaster or damaged chimneys; and damage slight.

VII Everybody runs outdoors, damage negligible in buildings of good design and construction; slight to moderate in well built, ordinary structures; considerable in poorly built or badly designed structures; and some chimneys broken, noticed by persons driving motor cars.

VIII Damage slight in specially designed structures; considerable in ordinary but substantial buildings with partial collapse; very heavy in poorly built structures; penal walls thrown out of framed structures; falling of chimney,

factory, stacks, columns, monuments, and walls; heavy furniture overturned, sand and mud ejected in small amounts; changes in well water; and disturbs persons driving motor cars.

IX Damage considerable in specially designed structures; well designed framed structures thrown out of plumb; very heavy in substantial buildings with partial collapse; buildings shifted off

foundations; ground cracked conspicuously; and underground pipes broken.

X Some well built wooden structures destroyed; most masonry and framed structures with foundation destroyed; ground badly cracked; rails bent; landslides considerable from river banks and steeps and slopes; shifted sand and mud; and water flash over banks.

XI Few, if any, masonry structures remain standing, bridges destroyed; broad fissures in ground, under ground pipe lines completely out of service; and rails bond greately.

XII Total damage; waves, seen on ground surface; lines of sight and levels distorted; and objects thrown upward into the air.

List of Earthquakes from IMD Catalogue occurring between LAT 6.00 and 14.00 DEG and Long 76.00 and 82.00 DEG. E for the period 1805 to 1990

Date	*O-Time*	*LAT*	*LONG*	*DPTH*	*MAG*
1822 1 29	000.0	12.0	79.0	0	5.0
1900 2 8	000.0	10.7	76.7	70	6.0
1916 1 7	000.0	13.0	77.0	0	5.0
1938 9 10	222345.0	7.7	79.2	0.0	6.0
1988 6 7	030605.0	9.9	76.9	–	4.5

Source : Report from the Department of Indian Meteorlogy, Pune

Notes and References

1. G.O.Ms.No.465, Revenue, dated 15 March 1984
2. G.O.Ms.No.1314, Revenue, dated 27 September 1986
3. *Tamilarasu,* Government of Tamilnadu Bulletin, October 1986, p.7
4. K.N. Sivaraja Pillai, *The Chronology of the Early Tamils, (1932)* Asian Educational Services, New Delhi, reprint, 1984, p. 178.
5. *Ibid.*
6. M.Alagarsamy Pillai, *Tirunelveli Sthalapurana Vasanam,* Sri Vidhyavinodhini Press, Thanjavur, 1916 (Nellukku Veliyitta kathai), pp. 170-173.
7. The Tamil verse of the Sthalapurana which refers to the episode is as follows அந்தணனின் மகிழ நெல்லை அமைவுற வெள்ளங்கொள்ளா தெந்தைதன் கரத்தாற் காத்தே இனிய நற்பூசை கொண்டு முந்துரு பஞ்ச நீங்க மொய்வளம் பெருக்கச்செய்த இந்த நற்கீர்த்தி கேட்டோர் இறையருள் பெறுவர் மெய்யே.
8. Most of the towns and villages where there are temples do have Sthalappuranam. They applaud the Lord of the place and other features in mostly panegyric way. Except few, all the Sthalapuranas were, originally written in Sanskrit. The word *Sthalappurana* itself is a Sanskrit word. Regarding the periods of the puranas, it might be said that the earliest of them belonged to the Pallava rulers who patronised Sanskrit languge .The dependability of the puranas as a source of history is very less. The Tirunelveli Sthalapurana was in Sanskrit. It was translated into Tamil by one Nellaiappakavirayar in the year 1868. As it was in poetic style, layman could not read and hence, in 1910, M.Alagarsamy, Secretary of the Madurai Sri Sivagnana Deepa Sabai wrote it in prose which was edited by A.Sundaram Pillai, a Tamil pandit with the S.P.G. Tiruchirappalli.
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CHAPTER - 2

HISTORY

Pre History

Paleolithic Age or Old Stone Age, the earliest period of Pre-historic civilization is said to have existed in Tamil Nadu about 2,00,000 years ago. [1] The Paleolithic Age in Tamil Nadu was followed by Middle Stone Age which has been calculated by the Archaeologists as 30,000 to 40,000 years old.

Microlithic Age

The archaeological importance of Tirunelveli district begins with the Microlithic Age. The Microlithic civilization flourished in the district by 4000 B.C.[2] Archaeologist Zenner Frederic and Bridget Allchin had some extensive researches on the Microlithic civilization of the district in the year 1956.[3] They discovered microliths in the *Teri* lands at the confluence of the river Tamiraparani with the sea. These sites no longer belong to the Tirunelveli district now, but form part of Thoothukkudi district. However, implements relating to Microlithic period (Microliths) have been discovered in Thenmalai, Mangudi and Old Courtallam area of Tirunelveli district.These implements were chiselled out of chert and Quartz type of stones.They were micro in size and so the civilization is termed as microlithic. The implements were sharp and made by using pressure techniques.Though the life style of the people belonged to the age mostly resembled that of the earlier age they began to collect the grains available naturally in the forests and stored for future use. It is during this period that transition of vocation from hunting to agriculture found its root The people of the period began to colonise the sea-coast also besides the river valleys and forests.The discovery of microlithic implements in the coast of Tirunelveli and Thoothukkudi districts prove this theory.

Neolithic Age

Neolithic civilization is marked by the transition of human life from nomadic to settled one and the use of polished implements. The date of civilization was 2000 BC. The Neolithic civilization follows the Microlithic civilization in the district. Evidence for the civilization had been discovered in Kilambur of Ambasamudram taluk.[4]

Megalithic Age

Megalithic Age followed the Microlithic Age. Burial urns unearthed in various parts of the district go to show the existence of the Megalithic people in the district. Such urns were discovered in Ilanji, Kilnatham, Vasudevanallur, Alwarkurichi, Vazhuthur, etc.

Adichanallur, now forms part of Thoothukkudi district as a result of bifurcation is on the southern borders of Tirunelveli district. The burialurns.unearthed (1895-1905) by Alexander Rea, of Indian Archaeological Survey in Adhichanallur had made it known to the world the archaeological importance of the district. [5] Archaeologist. Jagor from Berlin inspected Adhichanallur in 1876. He made an excavation and took the unearthed materials to Berlin . Louis Lapic of Paris also had done research on the Adhichanallur finds.

It is inferred from the materials found in the urns that the people used vessels made of mud, iron, bronze, etc. They knew pottery and blacksmithy. Agricultural and hunting implements discovered there bear testimony to the growth of blacksmithy. The agricultural profession had been developed and paddy, horsegram, ragi, maize, etc., were cultivated. The Adhichanallur urns show that the *Kuruvai* variety of paddy was cultlivated in the district right from the Megalithic Age.[6] The Age of Megalithic period in the district may be ascribed to 2nd century AD.[7]

Archaeology

Tirunelveli district is rich in Archaeological remains. Inscriptions, temples, cave temples and paintings found in the various parts of the district are the sources that could help constructing the early history of the district.

Inscriptions

The Archaeological Survey of India began to survey the inscriptions of the country in 1895. In the same year the copying of inscriptions in Tirunelveli taluk was begun. Starting from 1895 to the year ending 1912, most of the inscriptions in the temples of the present Tirunelveli District had been copied and published in the Annual Reports of the Archaeological Survey of India. In 1919, V.Rangacharya, the then Government-Epigraphist compiled a topographical list of the Inscriptions of the Madras Presidency. In his compilation about 410 inscriptions in the district were included. The number of inscriptions in Ambasamudram taluk is 150, in Nanguneri 15, in Sankarankoil 20, in Tenkasi 65 and 120 in Tirunelveli talluk. [8] Though the discovery of new inscriptions and its effect on the trend of history continues owing to the efforts of the Archaeological Survey of India, State Department of Archaeology, Archaeology and History Departments of the Universities, scholars, historians, journalists and others, the search and findings of new inscriptions are going on. The Earliest inscriptions of the district belong to 9th century A.D. In Tirumalapuram, Malaiyadikurichi, Kadayanallur and other places there are cave temples of the Early Pandyas.

Inscriptions of Maran Sadayan of early Pandya ruler are discovered in Thirukkurumkudi, Gangaikondan, Manur, Nambithalaivan Pattayam and other places. In the Narasimhaperumal temple, Tirunelveli a Tamil inscription belonged to the second regnal year of Varaguna Pandya (769-770 AD) is found. Inscriptions of Cholan Thalaikonda Veerapandya are discovered in Tirunelveli, Ambasamudram, etc., Chola Inscription belonging to Parantaka Rajaraja-I and Rajendra Chola are found in the temples of Tirunelveli, Gangaikondan, Cheranmahadevi. Kulotunga Chola's inscriptions are discovered in Manappadai veedu, Seevalapperi and Tirunelveli temples. Abundant inscriptions, belonging to the latter Pandya period are found in the district. Tenkasi Pandyas the Vijayanagar rulers and Madurai Nayaks also had issued inscriptions which have historical value and remain as primary sources to write the early history of the district.

Archaeological Monuments

Numerous ancient temples exist in the district. Barely one could see a village in the district without either a Shiva or Vishnu temple, belonging to either Pandya, Chola, Chera or Nayak period. Temples in Tirunelveli, Ambasamudram, Papanasam, Krishnapuram, Courtallam, Thiruppudaimaruthur, Sankarankoil, Cheranmadevi, Gangaikondan, Thirukkurumkudi, Thiruvaliswaram, Kallidaikurichi, Tenkasi, Brahmadesam, Mannarkoil, Manur, Vasudevanallur, Vijayanarayanam, etc., are of great archaeological importance, not just for the elegance but, for the message that they carry in the inscriptions which are numerous.

The names of 105 villages and towns that have been listed out by the State Department of Archaeology on the basis of their having inscriptions could be found in *Appendix-I.*[9] There are also churches and mosques dating back to 17th century. The Clarinda church in Palayamkkottai and the Pottalputhur Durga are old and have historical significance.[10]

Coins

Coins issued by the Cholas, Pandyas, the Nayaks and the Nawabs and the Roman coins have been discovered, from various places of the district. Evidences exist as to the existence of a mint in the district.[11] The coins were made of either gold, silver or copper. Among others some punch marked coins are also found.

By 1880's Rev. Loventhal of Danish Lutheran Mission, Vellore visited the composite Tirunelveli district and collected about 100 coins belonging to the Cholas, Pandyas, Nayaks and the Nawabs. He published a book titled *Tinnevelly Coins* in 1888 in which he describes his collection of coins. These coins are useful to fix the dates, and boundaries to assess the economic status of the period of the rulers who minted the coins.

Early History

The first well-lighted epoch in the history of the district is that reflected in the literature of Sangam (i.e.) the first three or four centuries A.D).[12] 'Iraiyanar Ahapporul' a commentary, which is one of the earliest sources, (C.AD 750) to refer Sangam describes in its introduction that there were three Sangams which lasted at long intervals for 9990 years altogether with 8598 poets (including a few Gods of the Saiva persuasion) as members and 197 Pandya kings as patrons. Some of the names of the kings and poets such as Kadungon and Ugrapperuvaludi are found in inscriptions and authentic records showing that some poets have got mixed up with much fiction so that, no account of value could be based on it. K.A. Nilakanda Sastri and other historians opine that Iraianar Ahapporul account on Sangam is enveloped in legend although it may well be a fact that an Academy (Sangam) of Tamil poets flourished under Royal patronage in Madurai.

During the Sangam period the Tamil country was divided among three grouped monarchs of the Chera, Chola and Pandya lines and a number of minor chieftains who according to the political conditions of the time either owned allegiance to or fought for one or other of these monarchs or else led an independent existence.

The area now comprising the Tirunelveli district formed part of the Pandya country right from the Sangam Age. It was popularly known as Thenpandinadu. Ays were the Vel Chieftains who ruled the country in and around the Pothigai hills. Greek geographer, Ptolomy refers to Ays as 'A' ioi' who was ruling the country which included Cape Comorin and Mount Bettigo (Podhigai hills).[13]

District Under Pandyas

The earliest indupitable reference to the Pandyan Kingdom is still that of the Asoka edicts.[14] Sangam literature and the archaeological sources of numerous inscriptions and epigraphical sources including the Velvikkudi grants and larger Chinnamanur grants are the vital sources to study the history of the Pandyas.

Sangam Pandyas

The earliest known Pandya king was Vadimbalamba Ninra Pandyan; also known as Nediyon, Nilamtharu Thiruvin Pandyan and Pandyan Makeerthi. 'Thiruvilaiyadal Puranam' refers to this ruler as he also had played roles in the purana.[15]

Palayakasalai Mudhukudumi Peruvazhuthi was one of the celebrated rulers of the Sangam Pandyas. Poet Mangudi Maruthanar in his work Madurai Kanchi had sung about him.

Mudathirumaran is considered to have ruled the Pandya country with Kapadapuram as his capital. It is also inferred that when the capital was engulfed by the sea, he came to Madurai along with his court poets and made it his capital.

Elamperuvazhuthi, the Perumvazhuthi who had died in the sea, was also a poet contributed to Purananuru and Paripadal. In Paripadal he has sung about the God of Thirumalirum Cholai **Arivudai Nambi.** Poet Pisiranthaiyar has sung about this ruler. As a poet, he himself contributed to Purananuru, Agananuru, Natrinai, Kurunthogai, etc.

Ollaiyurthantha Bootha Pandyan was a scholar king. His wife was Perumkoppendu.She committed '*sati*' after her husband's death. She has sung about the cruelty of the life in widowhood.

Arya Padai Kadantha Neduncezhiyan was a contemporary of Cheran Senguttuvan. He was the king versified in Silappathikaram as Pandya ruler who had punished the hero of the Tamil epic by mistake. The moment he realised his mistake collapsed in the court hall and breathed his last. Shocked by this, his wife too died instantaneously. He has also sung many songs in Purananuru including the one which highlights the importance of education and that of the teachers. [16]

Chithramadaththu Thunjiya Nanmaran was the brother of Aryapadaikadantha Nedumchezhiyan. He was the head of the 'Korkai', the second capital of the Pandyas and the present Tirunelveli district might have been within the jurisdiction of the Korkai division of the Pandya administration. On Nedunchezhiyan's death his brother proceeded to Madurai from Korkai and took the mantle of the Pandya Kindgom.

Thalaiyalamkanathu Cheruvendra Neduncezhiyan was the most important Pandya ruler of the early period. The prefix of the king's name indicates his victory at Thalayalamkanam, near Thanjavur. Mangudi Maruthanar was his court poet. Ugrapperuvazhudhi was the last of the Sangam Pandyas. It is said that Tirukkural was accorded Sangam imprimatur in his court.

Social History of the Sangam Period

The society was divided according to the geographical position of the land. 'Kuravar' in Kurinji, ayars in Mullai, peasants in Marutham, fisherfolk in Neidhal and the Maravars and Nyinars in Palai lands lived.[17] It seems there was no rigid stratification in the society in the beginning. The learned were respected. But at the close of the Sangam period, there arose little differences among the people who professed various occupations. [18]

Family was the lowest unit of the society. Though the eldest son wielded a higher authority in the family, sometimes the youngest who had learnt more than his elder brother was preferred. [19]

The position of women in the society was respectable. Women who were respected, participated in public functions along with their male counterparts. They had rights to choose their own life partner. There are literary evidences about the prevalence of *Sati* was prevalent, mostly in royal families. Evidences are abound to show that widowhood existed in the society. Moral and virtues were greatly observed and appreciated. Prostitution was not unknown.

Muruga cult was prevalent in the society. 'Kulavai Koothu' was the religious performance to appease Lord Muruga. The mother of Muruga was Korravai who was worshipped as the Goddess of victory. Shiva was worshipped as the creator of the Five Natural Elements (Aimboothangal). Thirumal was also worshipped. The temple in Thirumaliram cholai in Tirunelveli District had been versified in Paripadal. Besides, the people worshipped many minor and village deities. Jainism and Buddhism had also their influence over the people. The monks of these religions lived in the district.

Agriculture was the basis for all economic activities during the Sangam period. Hunting and fishing were chief occupation in the western ghats and coastal areas respectively. The Tambiraparani river played a vital role in the agriculture of the district. Blacksmithy, goldsmithy, carpentry and weaving were the other occupations that were in vogue. Pearl fishing was an important profession in the erstwhile Tirunelveli district during Sangam period.

There were traders and Traders' Guild. Internal trade flourished. The pearls of the Pandya country earned foreign exchange to a great extent. Korkai, situated on the mouth of the river Tamiraparani now in Thoothukkudi district was the second big city in the Pandya country.

The Kalabhras

By about 275 years following the Sangam Age, the Tamil country was ruled by a class called Kalabhras. The origin, rule and the mode of administration of the Kalabhras were not clearly deciphered. One of the views is that they belonged to Karnataka. [20] So far as Pandinadu is concerned, the Kalabhras did bring about the extinction of the Pandyas. They drove them away from Madurai. [21] Hence, during the Kalabhras rule in Madurai, the Pandyas might have moved to Korkai, their second capital and probably the present district of the Tirunelveli might be well under the Pandyan influence.

First Pandya Empire

Kadungon (A.D. 575-600), was the Pandya ruler who had released Madurai from the clutches of the Kalabhras. He was succeeded by Maravarman Avanisulamani (AD 600-620). Right from his days the Pandyan kings began to have prefixes, 'Maravarman' and Sadayavarman to their names. His son was Sezhiyan Sendan (AD 620-642). One of his inscriptions found in Malaiyadikurichi cave temple of Tirunelveli district, has referred to him as 'Maran Sendan'.

His successors were Maravarman Arikesari (AD 642-700) Kochchadayan Ranadheeran - (AD 700-730) who had defeated the Ayi ruler at Thiruppudaimaruthur (Ambasamudram Taluk), Arikesari Parankusa Maravarman *alias* Rajasimha I and (AD 730-768). Nedumsadayan Paranthakan *alias* Varaguna I (768-815).

The Ayis were ruling the country situated in the south western side of the Thenpandinadu, now comprising the Tirunelveli district. For preventing their encroachment and pushing them off the border of their country, Nedum Sadayan Parantakan built a strong fort at Ukkirankottai in the present Tirunelveli district. This Ukkirankottai was then known as Kalavanthapuram or Kalakkudi [22] Marankari, the Chief Minister of Nedumsadayan hailed from Kalavanthapuram. He was also known as Mathurakani. He was referred to in the Velvikkudi Grants. He was praised by the king with name, Mooventhan Mangalathu Peraraiyan. Marankavi's brother was Maran Eyinar and he became the Chief Minister of the Pandya kingdom after his brother.

Sathan Ganapathy the commander of Maransadayan also hailed from Karavanthapuram. He was otherwise called Samanthan Ganabathy and Samanthan Beeman. He was given the title, Pandya Amirthamangala Araiyan by the Pandya ruler.

Nedum Sadayan was succeeded by Srimara Srivallabha (AD 815-862). His rule was noted for two important battles in the history of Tamil Nadu. They are the Tellaru battle (AD 854) in which he defeated the Pallava ruler Nandivarman - III and the Kudamukku battle (AD 859) where he had conquered the combined forces of Pallavas, Cholas and the Gangas. He also had faced Singhalese invasion.

Varaguna-II ruled the Pandya country from AD 862-885. His period witnessed the rise of the Cholas in the north. The famous Thirupurambiam battle (AD 885) took place during his reign. The contemporary Pallava ruler Abarajitha, Ganga ruler Prithivipathi and the Chola ruler Aditya combined their forces against the Pandya. The battle was fought at Thiruppurambiam near Kumbakonam, on the banks of the river Cauvery. The Pandya ruler embraced defeat at the hands of the combined forces.

Parantaka Viranarayanan ruled the country from 860 to 905. He was closely associated with the Thenpandinadu. As the Cholas were powerful in the north, his attention turned towards south. The present Ukkirankottai, which was already referred to as the birth place of many ministers and commanders of the Pandyas, was under the control of a chieftain who had eschewed his allegiance to the Pandyas. Paranthaka Viranarayana conquered him.

The last ruler of the first Pandya Empire was Rajasimha (900-920). He was defeated by Parantaka, the Chola ruler and thus came to an end the First Pandya Empire in the Pandya country which comprised the Tirunelveli district too.

District during direct Chola Rule

The supermacy of the Cholas of Vijayalaya line was increasing in Thanjavur and adjoining districts. Parantaka-I (907-955) bore the title 'Maduraikondan' as early as in his third regnal year.The conquest and subjugation of the Pandyan kingdom was, however, a gradua process. Sundarachola Parantaka-II also had the title as 'Maduraikonda Rajakesari indicating his subjugation of the Pandya country.[23] Sundara Chola Parantaka-II invaded Pandya country and defeated Vira Pandya at the Battle of Chevur in which the Chola ruler claimed to have beheaded Vira Pandya.Though the Pandyas were defeated by the Cholas, they were not completely erased from the political scene. The complete overthrow of the Pandyas by the Cholas took place only during the reign of Rajaraja.

Amarabhujanga was the Pandya contemporary of Raja Raja the Great. When the Cholas were aggressive against the Pandyas, there formed an anti-Chola alliance among the Pandyas, Cheras and Srilankan rulers. This alliance survived up to the time of Amarabhujanga. Thiruvalangadu copper plates say that Raja Raja conquered the Pandya ruler and assumed the title 'Pandyakulasani'. Having brought the entire Pandya country under Chola rule, Raja Raja named it as Raja Raja Mandalam.

Rajendra Chola's rule in Pandya country is significant for he had appointed his son as the Viceroy of Pandya country with headquarters at Madurai around the year 1018. This arrangement continued upto the period of Kulotunga-I. These Viceroys were called Chola-Pandyas. They assumed titles suffixing the term 'Pandya'. It is said that Rajendra-I after his conquest in Gangetic region, named many villages in South India as 'Gangaikondan', to mean the conqueror of Ganges and built Siva temples there. One of such villages was Gangaikondan in the district, situated 12 km. north of Tirunelveli. [24]

DISTRICT DURING CHOLA-PANDYA VICEROYS

Sadayavarman Sundara Chola Pandyan

He was a son of Rajendra Chola appointed as the first Chola-Pandya Viceroy. Chera country was also under his control. He issued many inscriptions. Like his father's inscriptions, his inscriptions also begin with the epithet "Thirumanni Valara". During his period, Cheranmadevi was called as Nigarilichola Sathurvedhimangalam and the chief temple of the town was known as Cholendra Simmeswaram. Mannarkoil has been referred to as Raja Raja Chathurvethimangalam in his inscriptions. Though the Pandya scions tried to re-capture their kingdom, they could not succeed.

Maravarman Vikrama Chola Pandyan

He might have functioned as co-viceroy along with Sadayavarman for some period and later became the viceroy. His inscriptions are available in the district. The inscription in Athur informs that the village was called Rajathi Raja Chathurvedhimangalam. The Prahara in the Churnadevi temple was referred to as 'Rajathirajan prahara' during his rule. He continued as the Chola Pandya viceroy during the rule of Rajathiraja, the Chola ruler at Thanjavur.

Sadayavarman Chola Pandyan

The next Chola-Pandya viceroy at Madurai was Sadaya Varman, the son of Vira Rajendra Chola (1062-1070). His inscriptions are found in the district. One of his inscriptions in Cheranmadevi says that he had ruled the country from Rajendra Cholapuram.

The next and perhaps the last Chola Pandya Viceroy was Maravarman Parakirama Chola Pandya whose rule did not last long. Two of his inscriptions are found in the district.[25] During Kulotunga-I's rule, there were disturbances in Chola CountryThe Pandya's, cashing in on the trouble in Chola land, tried to release their land from the Chola rule and succeeded in attaining their goal also.The Chola Pandyas Viceregal system in Pandya country came to an end with Kulotunga-I.

Chola Pandya Administration in the district

There are evidences to show that the villages were self-governing in the district right from the days of the Pandyas as referred to in the Manur inscriptions.[26] Under the Cholas the self-governing village was the unit of Government. A number of them constituted 'Kurram' or 'nadu' or 'Kottam' as it was called differently. A number of 'Kurram' made up of a Valanadu often also called 'nadu' in the region where the smaller division was called 'Kottam'. Above the Valanadu was the Mandalam or province the largest division of the administration.[27] Gleanings from the inscriptions

reveal the existence of Kilvembunadu (Tirunelvelli, Seevalapperi), Melvembunadu (Cheranmadevi, Suttamalli), Mullinadu (Ambasamudram, Kallidaikurichi), Anmanadu (Cholapuram), Vanavannadu (Kalakkadu). Then-Arinadu and Vada-Arinadu (Sankarankoil,Tenkasi and Vasudevanallur). The Kurrams mentioned in the inscription are Thirukkannapper Kurram and Milali Kurram. Karukurichi is referred to as Thiruvazhuthuthi Valanadu. Under the Chola-Pandya viceroys, the district came under the divisions of Rajaraja Valanadu since 995 AD. It became Raja Raja mandalam since 1012 AD. The entire Pandya country became Rajaraja Pandinadu in 1022 AD and the area now comprising the district of Tirunelveli was known as Mudikonda Chola Valanadu.

An inscriptional evidence says that Mannarkoil was known as Rajendra Chola Vinnagar in Mullinadu of Mudikonda Chola Valanadu in Raja Raja Pandinadu. During the Chola Pandya rule most of the village names were changed indicating the Chola ascendancy. Mummudi Chola Cheri, Arulmozhithevar Cheri, Nitha Vinodhaga Cheri, Sundarachola Cheri, Kundavai Cheri, Ulaga Mahadevi Cheri, etc., are some of the striking examples. One of the streets in Ambasamudram was called "Rajendra Chola Perumtheru". But, these names were short lived as the country once again returned to the Pandya's fold.

Rise of the Pandyas

While the Chola suzerainty prevailed in the district, the Pandyas attempted many times to re-capture their land. One of the Pandya scions who fought for that was Srivallabha Pandya as known from the inscriptions.[28] His son Pandya Veerakesari continued his father's mission. The Chola royal family suffered a handicap as Adhi Rajendra died leaving none to succeed him. This caused a great deal of confusion which resulted in the partial disintegration of the Kingdom. The Srilanka which remained under the Cholas declared independence and the rulers assumed kingship. Kulotunga-I, an Eastern Chalukya prince through a Chola prince became the Chola king and brought the administration under his control. Though he could not re-conquer Srilanka, he did not want to lose Pandya country too. His Chidambaram inscriptions say that he defeated five Pandyas. Vikkirama Cholan Ula and Kalingathuparani, the Tamil contemporary poetic works corroborate his victory over the five Pandyas. The Pandya country was still under the Cholas. Kulotunga did not continue the appointment of Chola-Pandya viceroy at Madurai. K.A. Nilakanda Sastri opines that Kulotunga restituted the Pandya kingdom to the Pandyas who in turn paid tributes to the Kulotunga-I as subordinates.[29] Kulotunga-I's inscriptions are very few in the district. Instead Pandya Srivallabha's inscriptions are found in the district during the period of Kulotunga's rule. In one of Srivallabha's inscriptions Kulotunga-I's 31st regnal year is mentioned. It can be

presumed that Srivallabha might have ruled the district as a Chola subordinate.

Maravarman Parakkirama Pandyan (1087-1110)

He was also a contemporary of Kulotunga-I. It is supposed that he might have been the co-ruler of Srivallabhan. [30]

Sadaya Varman Srivallabha (1090-1116)

The inscriptions issued by him found in the district give details about the Pandya King including his coronation ceremony at Madurai. His son Pillayar Sundara Pandyan and his camp at Cholapuram near Tirunelveli listening the grievances of the people and the change of Cholapuram into Sundara Pandya Chaturvedhimangalam are all mentioned in the inscription.

Sadayavarman Parantaka Pandyan

One of his inscriptions was found in Kanniyakumari. He conquered the contemporary Chera ruler. During his period, Karumkulam a village near Tenkasi was known as, "Telungakula Kala Chaturvedi Mangalam' indicating his victory over the Teluga Beena, the ruler of Kalinga along with Vikkirama Chola. [31] He was in cordial relationship with the Cholas. He participated in the Kalinga war as a friend of the Cholas.

TIRUNELVELI PANDYAS

Maravarman Srivallabhan (AD 1132-1163)

His inscriptions are abundant in the district.[32] One of them issued in his 2nd regnal year states that he was seated in a throne called 'Munaya Tharayan' in Tirunelvelli. Hence, it is informed that he made Tirunelveli as his capital.

Sadayavarman Kulasekaran (AD 1162-1177)

He was the son of Maravarman Srivallabha. Like his father, he also ruled with Tirunelveli as his capital. At the same time, one Parakkirama Pandyan was ruling with Madurai as his capital. The relationship between Sadayavarman Kulasekaran and Parakkirama Pandyan is not clearly known. Some scholars opine that they might be brothers. Sadayavarman Kulasekaran besieged Madurai in 1168-1169. Parakkirama Pandyan at Madurai beseeched the help of Srilankan ruler. Before the help arrived Kulasekaran killed Parakkiraman and his family and captured Madurai. The Srilankan army under Ilankapuri Dandanayakan directed his forces against Kulasekaran at Madurai. This forced Kulasekaran to seek the Chola's help. The Chola intervention was not fruitful to Kulasekaran as he was

defeated and chased out of Madurai. Later, Veera Pandyan, son of the deceased Parakkirama Pandyan of Madurai was made King. But, Kulasekaran mustered an army in exile and re-conquered Madurai and Vira Pandyan fled the scene. The Srilankan army still in Madurai sought for re-inforcement from Srilanka, which under Jagath Vijaya Dandanayaka, reached Madurai. These combined Srilankan forces once again defeated Kulasekaran and Vira Pandyan was made king for the second time. But, his rule was short lived as Kulasekaran with the help of Chola King Rajathi Raja, who sent an army under Perumal Nambi Pallava Rayan, defeated the Singhalese forces and killed the two Singhalese Commanders and averted the Srilankan occupation of the Pandya country. These episodes are detailed in Srilankan Chronicles and inscriptions found in Arappakkam, Thiruvelamkadu and Pallavarayanpettai.

Kulasekaran's rule was not peaceful throughout. The Srilankan rulers did not stop his invasions. The Chola army entered Srilanka to check the Srilankan invasion. Now, Kulasekaran forgetting the Chola's help, joined hands with the Srilankan ruler. Hence, the Chola ruler had to send his army against Kulasekara, to remove him from the throne and put Vira Pandya once again on the throne.

But, Vira Pandya also could not rule long. He began to align with the Singhalese against the Cholas. By that time, the Kulotunga-III became the Chola ruler. Kulasekara Pandyan's son Vikrama Pandyan sought the help of the Cholas to seize the power and become the ruler. Kulotunga-III ousted Virapandya and made Vikrama Pandya as the ruler of Pandya country. When Virapandya sought the help of the Kerala ruler against the Cholas, the Kerala ruler instead brought about a rapport between Vira Pandyan and Kulotunga-III. However, Virapandya spent his last years only as a Chola subordinate.[33]

Second Pandya Empire (AD 1190-1310)

After the end of the civil wars and the restoration by Kulotunga-III or Vikrama Pandyan to the throne of Madurai, the Pandyan Kingdom recovered rapidly much of the power and glory that characterised it in the days before the sack of Madurai by Parantaka Chola-I. From then on almost till the end of 13th century, the power of the Pandyas attained great strength and expanded as far as north of Nellore and Cuddapah; a succession of able and truly distinguished rulers in the main line made Second Empire a real power in the politics of South India in their age.[34] The political situation then prevailed in Tamil Nadu was favourable and conducive to the rise of the Pandyas. As the Cholas became weak, the Chieftains under them became independent. The Pandyas grabbed this opportunity and made good use of the situation to assert their power.

Jatavarman Kulasekaran (AD 1190-1217)

His inscriptions are found in Tirunelveli district. His brother-in-law Kothai Ravivarman, a Chera Prince granted some gifts to the temple in Cheranmadevi which shows the cordial relationship that he had with the Cheras. Chola Kulotunga-III was willing to crown himself at Madurai for which Kulasekara opposed. Hence, Kulotunga-III defeated Kulasekara and later he restituted the Pandya country to Kulasekara who then onwards ruled as a subordinate to the Cholas.

Maravarman Sundara Pandyan-I (AD 1216-1239)

Considered to be the brother of Kulasekara, Maravarman Sundara Pandyan-I assumed the title *Chonadu Kondaruliya Devar* to mean that he had conquered the Chola land defeating Kulotunga-III. His inscriptions say that he called Kulotunga-III and his son to his court, made them to genuflect and restored their kingdom to rule acknowledging the Pandya suzerainty. The Hoysalas intervened on behalf of the Cholas and the restitution of Chola country to its ruler by Maravarman Sundara Pandya-I was not altogether unconnected with the Hoysala intervention. [35]

When Raja Raja-III succeeded Kulotunga-III to the Chola throne, he stopped paying tribute to the Pandyas as there were Hoysalas to espouse the cause of the Cholas. Hence, the Pandya army invaded Chola country and Raja Raja-III ran for safety but was imprisoned in Sedamangalam by a Kadava Chief Kopperum Singan. Now the Hoysalas came to the rescue of the Cholas. Some inscriptions in the Pandya Country reveal the disturbances the country experienced due to the Hoysala invasion.

In Thentirupperai (Thoothukudi district) Maravarman Sundara Pandya-I built a mandapa called 'Gnanasamuthra Mandapa' and from this it is known that the king had a title called 'Gnana Samuthiram' Then Tirupperai was also called Sundarapandya Chathurvedimangalam during his period.

Maravarman Sundara Pandyan-II (AD 1238- 1261)

Maravarman Sundara Pandya-I was succeeded by Sadayavarman Kulasekaran. But no information is available about his rule. He was succeeded by Maravarman Sundara Pandyan-II. His Chola contemporary Rajendra-III invaded the Pandya country to wipe out the humilities suffered by his father at the hands of the Pandyas. But the Hoysalas, shifted their friendship from the Cholas to the Pandyas and helped the Pandyas to defeat the Chola Rajendra-III.

In the eleventh year of his reign he named a village in the present Tirunelveli district after his 'Mamadi' (uncle) Hoysala Vira Someswara at

his suggestion and at about the same time a military officer of the Hoysala King Varadanna Dandanayaka was present in Tirunelveli.[36]

Jatavarman Sundara Pandya-I (AD1261-1271)

He was the most celebrated ruler of the Second Pandya empire. It was during his reign that the map of the Pandya country was re-drawn to include the whole of South India up to Nellore and Cuddapah in the north.[37] He assumed the title "Emmandalamum Kondaruliya Sundara Pandya Deva" to mean Sundara Pandya who had conquered all the regions. The Pandyas were at the pinnacle of power and fame during his rule. His Sanskrit inscriptions found in Tirunelveli. informs his victory over the Chera ruler Vira Ravivarman . Having defeated the Cheras, he assumed titles like *Ravi Venran' Kerala Vamsa Nirmoolan* etc. He subjugated the Chola king Rajendra-III and made him to pay tributes. He put an end to the Chola rule in Tamil Nadu. He defeated the Hoysalas in Kannanur near Tiruchirappalli which served as their second capital. Jatavarman Sundara Pandyan be sieged Sendamangalam, the fort of the Kadavaraya Kopperum Singan, captured it after defeating Kopperum Singan, though he was restituted subjected to his subjugation. Then he conquered Kanchipuram from the Telugu Chodas, Vanathirayaras of the present Salem and Vellore districts. His coffers were filled with costly tributes, gold and other ornaments presented to him by the defeated kings. He offered presents to many temples with the gold and covered the presiding deities of Srirangam and Chidambaram with gold tiled roofs.

Jata Varman Veera Pandyan (1253-1274)

He was a contemporary and co-ruler of Jata Varman Sundara Pandyan-I. [38] He took part in the Pandya's expeditions vigorously. His inscriptions are found in the district.

Mara Varman Kulasekaran-I (1268-1311)

Jatavarman Sundara Pandyan-I (1261-1271 AD), Jatavarman Sundara Pandyan-I (1261-1271 AD), Jata Varman-Veera Pandyan (1253-1274 AD) and Maravarman Kulasekaran (1268-1311) ruled contemporaneously for some time and Maravarman-Kulasekaran's rule outlived the other two for nearly forty years.

The evidence of foreign writers relating to this period confirms the inferences made from the inscriptions.Marco Polo,an Italian traveller who visited the Pandyan Kingdom towards the end of the 13th century speaks of five 'royal brothers'; and 'five crowned kings' of the great province of Ma'bar. Chinese sources regarding the diplomatic intercourse with Ma'bar in 1280 and the following years mention ' the five brothers who were Sultans'. The Muslim historian Wasaf who had chances of gaining more

accurate knowledge of South India in his days, says 'a few years, since the Dewar was Sundara Pandi who had three brothers each of whom established himself in independence in some different countries. Considering the Royal State maintained by these kings who were all contemporaries, it is not surprising that they struck foreign observers as ruling independently of one of another for not only did they cause inscriptions to be engraved and endowments to be made each in each one's name but, they seem to have even exercised the right of coinage. At the same time, there was no doubt about the superior position of Kulasekaran as the sovereign Monarch and this seems to have been understood by Marcopolo and Wasaf. Marcopolo says that Ashar was the eldest of the five brother kings. Ashar is no doubt a corruption of 'Sekar'. And Wasaf though states in one place, a few years since the Dewar was 'Sundara Pandi' and records his death, says elsewhere Kaks Dewar, the ruler of Ma'bar enjoyed a highly prosperous life extending to forty and odd years. The system of Joint rulers or co-regent's which thus prevailed in the latter part of the 13th Century in the Pandya Empire must have been the result of the great extension of the empire during this period and an imitation of the practice of sending out princes of the Royal family as Viceroys which had prevailed in the Chola empire.[39] Maravarman Kulasekaran's inscriptions are found in Cheramadevi, Tirunelveli and other places in the district. His Cheramadevi inscriptions created in the 20th regnal year of the king furnished some commentary on his title and records that he conquered Malainadu, Sonadu and two Kongus, and Tondaimandalam. Tirunelveli inscription mentions that he built a prakara wall of Tirunelveli temple from the booty collected after defeating the Kerala, the Chola and the Hoysala Kings. Maravarman Kulasekaran-I bore the title "Emmandalamum Kondaruliya".

Soicial and Economic life under the Pandyas (as observed by the Foreign travellers)

Marco Polo, a Venitian traveller and Wassaf, an Arab historian left important accounts on the socio-economic life of the people under the Pandyas. According to them, the country was then known to foreigners as Ma'bar. Writing on Kayal, the chief emporium of the Pandyas, Marco Polo says "that the king' to whom the city belongs administers this kingdom with great equity and extends great favour to merchants and foreigners, so that, they are very glad to visit the city. It is at this city that all the ships touch that come from the west, as from Hormos and from Kis and from Aden, and all Arabia, laden with horses and with other things for sale. And this brings a great concern of people from the country raise about and so, there is great business done in this city of Coil (Kayal).

The horse trade of Kayal was of considerable political importance and a good part of the revenues of the kingdom was spent on the purchase of horses for the king and the army. According to Marcopolo about 1400

horses were impoted at Kayal port every year. The price of each horse was fixed as 220 dinars of red gold.[40] Marcopolo's account describes the pearl fishery on the coast of the Pandya country part of which falls in the erstwhile'Tirunelveli district. The pearl fishery centres now fall under Thoothukudi district.

Marcopolo gives some information about the king, queen and courtiers. The king, as recorded by him, had five hundred wives and many children. He mentions about Barons who waited upon the king. This information was corroborated by epigraphical sources which mention that there were Tennavan Abathuthavigal (Trusty legions) to safeguard the kings from all dangers.

On the social life, Marcopolo says that the King and the people were poorly dressed. He mentions the practice 'Sati' in the society. People worshipped the ox and beef eating was considered a sin. People rubbed the floors of their houses with cow-dung. They mostly

sit on the floor. Lance and shield were the weapons used in wars. People took bath twice a day. They used right hand to eat and they drank water from drinking vessels without the vessel making contact with the lips when the strangers asked water they would be supplied water not in the drinking vessels of other family members. The stranger would be asked to adjust his hands as a cup and the water would be poured into it to quench the thirst.

People mostly abstained from wine. The debtors were severely punished. If any defaulting debtor dodged payment, the creditor would meet him and draw a circle around him on the earth. By doing so, the creditor binds the debtor to that particular place, amounting almost to imprisonment. The debtor is so bound that without making arrangement for the repayment of the debt, he could not come out of the circle. Otherwise, he would be punished with death as a transgressor against right and justice. People had belief in omens and astrology. The male children were sent out when they attained the age of thirteen and after that they had to eke out their living through trade. He ascertains the existence of Devadasi system in the country. The people of Kayal and other parts of the country, had the practice of chewing betel leves. Nobles and people of the upper strata of the society used cane cots to sleep on while others slept on the floor.

Civil War in the Pandya country and the Mohameddan Invasions

Veera Pandyan and Sundara Pandyan were the two sons of Maravarman Kulasekaran. Veerapandyan became the ruler in 1296-1297. Sundara Pandyan became the Pandya King in 1303. The mutual enmity and jealousy between the two is said to have brought the downfall of the Pandyas.

Of the two, Veera pandyan was brave and efficient and hence, Kulasekara Pandyan wanted Veera Pandyan to succeed him. Irked and irritated by this, Sundara Pandya killed his father and became the king. Veera Pandya wanted to take revenge of his father's murder and chased Sundara pandyan out of the country. Sundara Pandyan took refuge under Alaud-din khiji who then ruled from Delhi.[41]

S.Krishnasamy Iyengar [42] is of the opinion that Sundara Pandyan did not directly meet Alaud-din khilji at Delhi but he only met Malik Kafur, Alaudin's most trusted General who then was making exploits in South India and sought his help to combat Veera Pandyan. Malik Kafur readily agreed to Sundara Pandyan's request not because he wanted to help him but he had an eye on the wealth of the Tamil country.

Malik Kafur's Invasion

The year 1310-11 is an important milestone in the history of the southern districts of Tamil Nadu because many important events in the history of the Pandyas like the murder of Maravarman Kulasekaran, Sundara Pandyan's ascendancy as the king, civil war between Sundara Pandyan and Veera Pandyan and the invasion of Malik Kafur.[43]

The accounts of Amir Khresra, Ziauddin and Krishnaswamy Iyengar's *South India and Her Mohammadan invaders* are the important sources to study the Muslim Invasion of the southern districts of Tamil Nadu. Malik Kafur's invasion reached farther south of Madurai.[44] Though Malik Kafur did not capture and annex any portion of the country with Alauddin Khilji's kingdom, his invasion left the people in confusion and the wealth of many temples were plundered. This invasion rang a deathknell to the Second Pandya Empire. Even after the exit of Malik Kafur the tussle between Veera Pandyan and Sundara Pandyan continued and each claimed to be the rulers,[45] which caused more chaos in the country. This was fully exploited by the Travancore King Ravi Varman Kulasekaran who invaded and captured many places belonged to the Pandyan Kingdom.

The District under Madurai Sultanate

In the accounts of the Muslims , Madurai was recorded as Ma'ba. In about 1319 Khusa Khan, a Muslim general of the Delhi Sultanate invaded Madurai which was an uneventful one. The Afghan captured power from the Pandyan and established their rule over Pandyamandalam. The Madurai Sultanate came into existence as a result of the expansion of the Delhi Sultanate to the far south. Uluq Khan, I(later Mohammed-bin-Tughlug) a son of Ghiyas-ud-din Tughlug invaded Madurai and the then Pandya ruler Parakrama Pandya escaped enabling the victorious army to occupy Madurai and thus the Sultanate of Madurai became the 23rd province of the Delhi Sultanate of the Tughlugs.

Since Madurai was far off from Delhi, it became impossible to control the administration from Delhi. The result was the assertion of independence by the representatives of the Delhi Sultanate at Madurai. In 1335-AD Sayyind Ashan Shah Kotwal of Ma'bar declared his independence. Muhammad-bin-Tughluq attemped to punish Ashan Shah but he could not succeed. In 1340, Asan Shah fell a victim to a conspiracy against him and died. Udaiyi became the next Sultan. When he also died by the attack of the Hoysalas who spared no effort to oust the Sultans from South India, Ghiyasud-din-Dhamaghani, son-in-law of Ashan Shah ascended as the Madurai Sultan. The Hoysalas continued their attack on the Sultan and Hoysala ruler Vira Bella fell a prisoner in the hands of the Afghans. He was. beheaded and his head was hung on a pike on the fort of Madurai.

Canarese influence in the District.

Though the Mysore Bellala's connection with the district was short one, there are certain influences left in the district by them. One of the ancient anaicut across the river Tambiraparani is the 'Canaddian anaicut'. A person called 'Palaiyan' a Canaresee man, is said to have built the oldest portion of the fort at Palayamkottai. Considering all these Caldwell observes, "We have reason to conclude that they belonged to the period before the commencement of the rule of the Nayaks in Madura, when paramount authority over the south was claimed by the Kannada Kings of Dwarasamudra."[47]

It was the time that the Vijayanagar empire was established and Bukka, one of the founder rulers of the Empire, sent his son Kumara Kampana to suppress the Madurai Sultans. The Vijayanagar army defeated the Sultans and most of the country under the Sultanate passed over to the Vijayanagar empire. Yet the Afghans continued to rule over a part of Madurai country. Bukka-II, the emperor of Vijayanagar defeated Alauddin Sikkandar, the last of the Sultans in about 1378 and annexed Madurai. This marked the end of the Sultanate.[48]

The Madurai Sultans did not bring the entire Pandya country under their rule . The Pandya rulers continued to rule the small principalities from Tenkasi and Tirunelveli. Kayalpattinam in the composite Tirunelveli district was under the control of the Sultans as it served the chief port of the Kingdom. There are Arabic-Tamil inscription in Kayalpattinam as proof for the extension of the Sultan's rule there. An inscription belonging to 1336 speaks of a mosque built for Mohammed Jalal-Ud-Ins.

Tirunelveli and Tenkasi Pandyas

Though the Malik kafur invasion, Madurai Sultanate and the Vijayanagar Expedition wiped out the Pandya rule in and around Madurai,

they actually moved southwards and ruled small principalities with headquarters at Tirunelveli and Tenkasi

Even when all Tamil regions came under Vijayanagar Rule, they allowed the Pandyas to rule the Tenpandinadu recognising the Nayak's suzerainty. Hence, from 14th to 17th Century, the Pandyas ruled the country now comprising the districts of Tirunelveli and Thoothukkudi.[49] Pudukkottai and Srivilliputtur Copper Plates and the Inscriptions in Tirunelveli and Tenkasi testify to the rule of the later Pandyas in the districts.[50] Inscriptions of the later Pandyas are also found in Karivalamvanthanallur, Moovarai Venran and other places in the district.

Sadaya Varman Parakrama Pandyan (1422-1461)

Though several Tirunelvelli Pandyas ruled the area, we have abundant source only about Sadayavarman Parakkrama Pandyan. It is said that three Pandyas preceded Sadayavarman Parakrama Pandyas in Tirunelveli. Of the three, two bore the name of Parakrama Pandyan. The third ruler was known as Jatilavarman Kulasekaran (1395). It has been calculated that, of the two, Parakkirama Pandyan, the first ruled around 1365 and the second around 1384. The Elanji inscription reveals that the third Tirunelveli Pandya, Jatillavarman Kulasekara ruled by the year 1395.[51]

Arikesari Parakrama Pandyan was the builder of the Tenkasi temple. His prasasti, in the temple which begins as 'Poomisai Vanithai Navinir Poliya' records his political achievements and his services to religions. He bore the titles such as Ponni Perumal, Manabaranan, Korkai Vendhan, Perumal Vazhidhi, Tenkasi Konda Udaiyar, Parakkraman, etc. He claimed some victories in some places in the district but against whom he was victorious was not clearly mentioned. An inscription in Semmalai says that Parakkrama Pandya defeated the Cheras.

In his inscription at the entrance of Tenkasi, Viswanatha Temple, he says that the God Viswanatha of Kasi (North) appeared before him in his dream and ordered him to build a temple for him at Tenkasi as the temple in Kasi became dilapidated. It is said that in obedience to this "heavenly command", he built the temple in Tenkasi.

In the Tenkasi temple, he consecrated Lord Viswanatha and Ulagamuzhuthumudaiya Nachiar (Omnipresent Goddess). He also built Artha Mandaba Edai Nazhikai, Mahamandabam, Sopanam, Avaranam,Gopura and other architectural features meant for temples. He granted lands to the temple in the Villages of Elanji, Puliyur, and Veera Pandinallur, etc. It took 17 years to complete the construction of the temple (AD 1446 to 1463).

At the end of the lower stone, construction of the nine Gopuras, he died. This event is described in one of his inscriptions. [52]

He also renovated the temples in Tiruppudaimaruthur, Sembakavanam, Tirukkutralam and other places. He made arrangements for midnight Pooja in the Nellaiyappar temple in Tirunelveli. He made Tenkasi his capital. His successors held their crowning ceremony in the Viswanathar temple of Tenkasi. As a mark of his close association, devotion and service to the Tenkasi temple his image was also installed inside the temple.

Azhahan Perumal Kulasekaran or Srivallabhan (AD 1429-1430 - 1473)

A practice that could be noticed among the Pandyas was that the brothers of the king in some cases co-ruled the country. It came to be known from the inscriptions of the different kings in the same regnal year. There are inscriptional evidences which show that brothers of Sadayavarman Parakrama co-ruled the country. The brothers included Azhakan Perumal Kulasekaran or Srivallabhan, Veera Pandyan, Maravarman, Vilarama Pandyan, Jatilavarman Kulotunga Pandyan and others. They might have co-ruled the country or ruled the different parts of the Pandya country.

Azhakan Perumal Kulasekaran or Srivallabhan, became the king after seven years of his brother's ascendancy (i.e. in 1430 AD). He ruled for nearly a period of 42 years including the period of his co-rulership. His inscription in Tenkasi temple reveals that he continued the temple construction work inaugurated by his brother. [53] He built a Vishnu temple in Tenkasi south of Viswanatha temple. His inscriptions are found in Tirunelveli, Shengottah, etc.

Veera Pandyan

Veerapandyan was also a brother of Parakrama Pandyan after whom a portion of Tenkasi was called as Veera Pandyan Chathurvedimangalam. The Brahmins of the villages served the God of Tenkasi as priests, expositors of Vedas in the temple, etc. Other Tirunelveli Pandyas about whom inscriptional evidences available are Maravilaram Pandyas, Arikesura Pandyan and Kaliyuga Raman, Tirunelveli Perumal Veera Pandyan whose inscriptions are found in Cheranmadevi.

Srivallabhan (AD 1534 - 1543)

After Parakrama Pandya and his brothers, the Tirunelveli area was ruled by the sons of the sisters of Parakrama, important among whom was Srivallabha. He was the son of Ahavarman. He was adorned as the king who re-established the Pandya rule. He was also known as the Srivallabha who had ended the 'Dark Age'.

He became the ruler in 1534 AD. *Achutharaya Bhyudayam* , a literary source describes his victory over the Venad king on the banks of the Tamiraparani. The causes for the battle was said to be the capture of Cheramadevi, Brahmadesam Ambasamudram and other places by the Chera ruler from the Pandya country. Srivallabha sought help from the Nayak ruler at Madurai to counter the Chera ruler. Achutha Raya, the Nayak ruler sent an army under the captainship of his brother-in-law Salakarajan. The combined forces of Srivallabha and Salakarajah defeated Udhyamarthandavarman, the Travancore ruler on the banks of the Tamiraparani. A victory pillar was erected on the battle field and the portion captured by the Cheras was restored to the Pandyas. An inscritpion in Kancheepuram states that as a token of friendship, the Pandya gave his daughter in marriage to the Vijayanagar King. As Srivallabha had redeemed the Tirunelveli area from the Cheras with the help of the Vijayanagar King he assumed the title, "Pandya Rajya Prathista Panacharian".

Tirunelveli Perumal

After Srivallabha, we have inscriptional reference about two Pandya rulers, viz., Parakrama Pandya Kulasekaran and Tirunelveli Perumal Kulasekaran (AD 1551-1567) who were brothers. Tirunelveli Perumal had other titles such as Salivathipathy, Azhakan Perumal, Dharmaperumal, etc. It is said that Srivallabha was Tirunelveli Perumal's elder cousin. Under Srivallabha, Tirunelveli Perumal was an important official. An inscription in Tenkasi temple speaks of his growing ceremony in the year 1551 AD. He granted endowments of lands to the Tenkasi temple. He was also a poet himself. He wrote verses on the Viswanatha, the presiding deity of Tenkasi. He had a title 'Veeravenkatamalai" to mark his poetic talent.

Athiveera Rama Pandyan-I (AD 1564 - 1606):

His full name was Azhakan Perumal Athiveera Rama Srivallabhan. He was the son of Tirunelveli Perumal and was mentioned in the copper plates of Tenkasi and Pudukkottai. It is said that he had shifted his capital from Tirunelveli to Tenkasi. He had accepted the suzerainty of the Vijayanagar ruler Venkata-I. [54] He built the Kulasekaramudaiyar's temple near Tenkasi in his father's name and renovated many temples. He was a man of letters and encouraged the growth of literature. He built separate temples for Chokkanatha and Seevala Vinnagar Emperuman within the Viswanatha temple of Tenkasi. During his rule, a temple for Krishna was built in Srivilliputhur.

He was a great literateur. He wrote many books and translated the 'Naidatham' (or) Nala's story from Sanskrit to Tamil. Other books written

by him are Koormapuranam, Kasi Kandam, Vayusankithai, Lingapuranam, etc. He was also well versed in Sanskrit. He also wrote for children teaching morals. 'Vetri Verkai' is a code of moral written by this king especially to be taught to children.

Varadungan (AD 1588 - 1609)

He was the second son of Parakrama Kulasekaran. In inscriptions, he was also mentioned as Abirama Sundareswaran and Veera Pandyan. A Tenkasi inscription mentions that he was crowned in the year AD 1588. He was a co-ruler of Adhiveera Rama-I. He ruled the portion in and around Karivalamvanthanallur in the later Tirunelveli district. He was also a poet. He wrote verses on Siva, the presiding deity of Karivalamvanthanallur and the collection is known as Pathitrupathu Anthathi, Kalithurai Anthathi and Venba Anthathi.

Varakuna Raman Kulasekaran (AD 1615)

He ascended the throne in 1615-1616 AD. He was said to be the brother of Adhiveera Rama-I. He performed 'Somayaga' and earned the title 'Somayaji'. He was also called 'Dikshithar'. His inscriptions are found in Tenkasii and Courtallam . He endowed lands and house sites to the Brahmins who conducted the 'Somayaga' for him.

The details of the Tirunelveli Pandyas or Tenkasi Pandyas were not known after Varakunakulasekaran. Inscriptions are available containing information about Abirama Athiveera Raman, Seevala Varakuna Raman and others. Seevala Varakuna Raman ruled by AD 1753, endowed lands to Courtallam temple.

Thus, the Pandyas, as a ruling clan, preserved the Tamil culture and literature, right from the Sangam period up to 17th Century. It is very rare in the world history that a single dynasaty ruled for such a long time (i.e.) about centuries and preserved cultural, political, religious and linguistic features of the Tamils. [55]

Throughout the reign of a great number of these Pandya kings of the later line, the kings of Vijayanagar appear to have exercised supreme authority. It seems that they did not interfere much in the internal affairs of the country. They contented themselves with receiving tributes and occasional military help and the principal result of their suzerainty was that the various petty states included within their nominal rule were protected from foreign invasion and their propensity to spend their time in fighting with one another was kept in check. [56]

POLITICAL, SOCIAL AND ECONOMIC LIFE IN THE DISTRICT UNDER THE PANDYAS

Political Division

The country was subdivided into Valanadus (which were further divided) into 'Kurtams'. These 'Kurtams' became 'Nadus' later. Under the Nadus were the villages.

Valanadu

Valanadu consisted of many kurtams (later Nadus). An inscription in Thirukkurungudi belonging to Varaguna-II, refers to Vaikunda Valanadu. This might be with the headquarters at Srivaikundam. [57] Other Valanadus came to be known through inscriptions are Keralasinga Valanadu, Tiruvazhuthi Valanadu, Srivallabha Valanadu, Amirthaguna Valanadu, etc. These Valanadus existed right from the days of Varaguna-II and Rajasimha-I.

Nadu and Kurtam

There were about 100 nadus in the Pandya Mandalam. Kurtam was known even during the Sangam period. Among the Nadus deciphered from the inscriptions of the period, Anmanadu,. Vemba nadu, Kalakkudinadu, Mullinadu, Kulanadu, Tiruvazhuthinadu, Murappanadu, Amirthagunavalanadu, Manaviravalanadu, Parantakavalanadu Kilvembunadu, Melvembunadu, Kilkalaikudinadu, Konadu, Kurumalainadu, Ten Arinadu, Vada Arinadu, Karunkulavalanadu, Muratayanadu, Tenkarainadu , Asurnadu, Surankudi nadu, Ari nadu, and Kalakkanadu seem to have existed in the area of the composite Tirunelveli district. [58]

Administration - Ministers

King was assisted by ministers. Men of letters and poets also had been ministers in the court of the Pandyan rulers. Marankan or Mathurakavi, was a minister under Arikesan Maravarman and his son Varaguna I. Manikkavasakar, one of the authors of Devaram served as the minister for Varaguna II. Vanatharayan, Kalingarayan, Brahmarayan, and Brahmathikajan were ministers under the Pandyas as revealed by the inscriptions.

Officials

The King's orders were executed by the officials. 'Tirumanthira olai' was the officer incharge of copying the orders of the king on the palm leaves. Tirumanthira Olainayakam supervised the copying and he was authorised to put his signature in the copied leaves on behalf of the king. 'Agappurivara Muthaligal' were the officials who discharged the day to day duties of the king. Higher officials under the king had the suffix "Araiyan" to their name. For the collection and administration of land tax,

there was 'Puravu vari Thinaikalam'. It may be compared to the 'Board of Revenue' of the British administration.[59] The head of the department was called Thinaikala Nayakam. There were officials known as 'Naduvakai servar' who looked after the land reformation.

Justice

The Pandyas were synanymous for justice as referred to in the Kannagi episode in Sillappathikaram . 'Aramkooravai' was the Court for hearing all the cases in general. King himself presided the court in special cases. Some of the Pandya kings had titles reflecting their impartiality in justice. For example, a title of Maravarman Sundara Pandya I was "Manuneri Thazhaippa Manimudi Choodi."

The issues were generally on land disputes, water disputes, boundary disputes, and property disputes. In cases relating to lands, the documentary evidences were given importance. Easement rights, Prescriptive rights, Convention and usages were also respected in laws.

Eyewitness and circumstantial evidences were also taken into account . In the absence of them , self-declaration in the name of God, trial by ordeal were also used to bring out the truth.

The cases of murder, robbery and the stealing of public property were tried in the presence of the eldermen of the villages concerned, who were called 'Nyayathars'.

Local Government

As under the Chola administration, there was autonomous village administration, under the Pandyas also. The Mannur inscription of the Pandyas bears testimony to this.[60]

Economic Life

Agriculture was the prime source of economic life of the people. Land revenue constituted the major income to the Government. Other sources, of income to Government included Octroi, tax on trades and industries, taxes for the use of forests, minerals, salt pans etc., Tributes from the subordinate rulers and chieftains and booty acquired on victory also filled the State Treasury.

Lands were measured and classified according to the fertility and taxes were levied. Tax exemptions were granted to temples, ponds, streams, flower garden for temples, burial and cremation grounds. The land tax was known as 'Kadamai' or 'Kannikkadan'. It is conceived from the inscriptions that 1/6 of the produce was collected as tax.[61] Taxes were

paid either in cash or in kind or in both. Government expenditure included administrative expenses, salary for the officials, military expenses, palace expenses, public work expenses, etc.

Land holdings were classified into three groups. They were traditional land holders or 'Vellan Vakai', Land grant holders or 'Jeevitham', Pogam or Kayaviruthi and Brahmadaya or Devadhana or Salabogam.

Irrigation facility were improved by the Kings. River Tamiraparani and other rivers in the district have rendered the district fertile. Forests and unused lands were reclaimed.

Pearl fishing, making bangles by cutting conches , salt manufacture, fishing, weaving were other occupations of the people. Metal work, pottery, ornament making, mat weaving, construction and architecture, sculpture making drawing and carpentry were also practised. There were guilds for traders and other professionals. An Ambasamudram inscription says that a trader's guild had donated lands to the Siva temple in Ambasamudram in A.D.1033.

The Pandyas issued gold coins. They were known as 'Kasu' and 'Pazhankasu'. One of the Varaguna's inscriptions reveals that the king had granted 290 gold coins to Ambasamudram temple.

Social Life

During the Sangam Period, people mostly built their houses on the banks of river the Tamiraparani. As the population increased, other areas were also colonised. Villages were situated near water sources and groves. An inscription in Srivaikundam describes a village called Pullur as surrounded by green groves with paddy fields and ponds full of water and flowers.

Society under the Pandyas were divided into castes llike Brahmins, ruling class or royal family, traders, Vellalas or agriculturists and so on.

Those who were punished with death sentence might come forward to sacrifice themselves to a God. Such person would be taken in a procession with 12 knives and finally allowed to sacrifice himself. After death, his relatives would cremate his body with joy.

Superstitions and astrology were relied upon. Samudrika lakshnam was a psychological science used to predict one's habits and character by studying their physical features.

Position of Women

Women very rarely participated in publlic and government duties. Women of lower classes worked to earn their livelihood. Mat weaving,

cloth weaving, selling milk and milk products and fish were also their occupations. Transplantation of paddy seedling, watering the plants were mostly done by women. The other fields in which the women greatly participated were music and dance but this was not common to all communities but to a specified few.

The most indispensable duty of a woman in her life was to marry a man. The marriage procedure and ceremony had changed time to time as per the requirement and suitability of the society. The property right of women in those days was not clearly known. But many women granted lands to temples which implies that atleast women of royal families had titles and right on the lands. Though there was no ban on women education, it is to be noted that there was no proper encouragement for it. There are inscriptional evidences to say that giving lands and articles as gifts to the bride was in vogue.

Sati (self-immolation) of wives on the funeral pyre of their dead husbands was in vogue in the society. An inscription in the district says that a citizen had granted certain lands to the temples in the name of the son of his daughter who had committed *Sati*. [62] 'Sati' was committed only on the own wish of the wives of the deceased husbands. There was no evidence to show that *Sati* was forced on wives.

Women who had dedicated their entire life for the service of the God were called 'Devaradiyars' to mean the slaves of the God. They were well versed in music and dance. There were also grants given by the temple in the name of *Devaradiyar*. One such grant was a perpetual lamp given in the name of Sathan Deyam, a 'Devaradiyars' according to an inscription in Brahmnapuri near Tirunelveli. [63]

Music and Dance

Nammalwar, Periyalwar and Andal, three of the twelve Vaishnavite exponents of 7th or 8th Century and Manavala Mamunigal belonged to the composite Tirunelveli district. Their hymns were recited with music and musical instruments. There are references about the musical instruments played during the time. One of the Andal's hymns refers to 'Mathalam' and a kind of Conch *varisangam* being played during the marriage ceremony. [65]

There are epigraphical sources to show that dramas and dances were enacted in the temples. An inscription in Athoor near Tirunelveli says that dramas were enacted in the Athoor temple in the month of Avani. The stage was called 'Azhakiya Pandyan Koodam' and the dramas were known as 'Thirunadagam' to mean that the dramas were about Gods. The artists of the play were given land grants known as 'Koothukkani'.[66] Santhikkoothu' and 'Vinodhakkoothu' were prominent in Tamilnadu. In

Athoor temple 'Santhikoothu' was performed by a male dancer called 'Santhikoothan' and female dancer called 'Thirumeni Piriyadhal'. One of the inscriptions in Tiruchendur temple (1425) refers to the order issued to the 'Devaradiyar' of the temple to perform dances during the 'Mahapooja' and 'Anthikappu' festivals of the temple.

Language and Education:

The Pandya kings patronised Tamil sangams. They themselves being celebrated poets, many Pandya kings authored many Sangam poems. Athiveera Rama Pandya, a latter Pandya ruler (15th Century) was also a scholar in Tamil. Nammalwar, Periyalwar Madurakavi or Marankavi, Andal, Thirikooda Rasappa Kavirayar, Sivagnana Munivar and other celebrated poets belonged to the composite district who lived between 7th and 16th centuries. The epigraphical language of the Tenkasi and Tirunelveli Pandyas was in chaste Tamil. The best example for the latter Pandya's Tamil inscription is the Tenkasi inscription of Arikesari Parakrama Pandya.

Education:

Like the modern Universities there were 'Salais' in the Tamil Country during the Pandya rule. One of such 'Salais' situated in Tirunelveli region was the Parthibasekarapuram Salai in the Ayi country established by Ayi King Karunandakkan in 866 . [67] They functioned as the present Administrative staff Training College. Strict discipline was observed in the Salais.

There were also Vaishnava and Saiva Mutts to promote education and literature. Such Mutts were established in Cheramadevi, Tirunelveli, Aruviyur, and Courtallam, by the Saivite school and in Tirukkurungudi and Vanamamalai by Vaishnavite schools.[68] A 13th Century inscription reveals that the Arulala Thadan Mutt in Alwar Thirunagari founded by Tirkkurusur Mahamuni had Thadu I facilities for the students. [69]

Libraries

There were libraries in the temples and Mutts. These libraries were called Saraswathi Pandarams. One such Pandarams functioned in the Cheramadevi temple where vedas and puranas were taught. [70]

Religion

Right from the Sangam Age Hinduism, Buddhism and Jainism were followed by the people. Saivism and Vaishnavism were two sects of Hinduism. There was a *Bhakthi Movement* in Tamilnadu in 7th, 8th and 9th centuries during which Alwars and Nayanmars sang Divya Prabhandam and Devaram respectively and Tiruvasagam praising Vaishnavite and Saivite Gods.

Saivite temples in the district versified by the Nayanmars in 'Devaram' and Tiruvasagam are in Tirunelveli and Courtallam; Devaram, Tiruvasagam and Thiruvembavai hymns were sung in the temples. Even during the period of Maravarmen Sundara Pandya-I, Tiruvembavai hymns were sung in the Siva temple of Nanguneri.[71] During the rule of the same king idols were consecrated in the Thenthirupperai temple for Sundaramoorthy Nayanar and Paravai Nachiar.[72] The kings instituted enormous grants to the temples. One of the Varaguna Pandya's inscriptions in Ambasamudram records that 290 gold coins were granted to Ambasamudram temple and interest fetched by the coins in the form of 580 kalam paddy was instructed to be used for four time offering a day. The Nellaiyappar temple in Tirunelveli also got many such grants both from the king and the public.

The Vaishnavite branch of Hinduism was promoted in the district by the three Alwars, Periyalwar, Nammalvar and Andal. Thirumaliruncholai was versiified in the Paripadal, a sangam work.

Nammalwar was born in Kurugur in the present Thoothukkudi district. It is now known as Alwar Tirunagari. He was also known as Kari, Maran, Parankujan and Sadagoban. The collection of his devotional songs is known as 'Thiruvoimozhi'. It is said that he got enlightened under a Tamarind tree. The Tamarind tree which is said to be still in existence is referentially referred to by the people of Alwar Tirunagari as 'Tiruppuli Alwar'. 'Sadagoban Anthathi' written by poet Kambar is about Nammalwar and his work. Maran Kari, or Madhurakavi was a disciple of Nammalwar and he was a minister under Nedumsadaya Parantakan in 770 AD. Madhurakavi was born in Thirukkoilur.

There were 17 temples in the composite Tirunelveli district which were visited by the Alwars. These places were called 'Divya Desams'. Among the Divya Desams there were nine temples called 'Nava Tiruppathi' including Tirumalirunjalai, Vanamamalai, Alwar Tirunagari, Thirukkolur, and Thirukkurungudi.

Following the Alwars, there were 'Acharyars' who continued the mission of propagating Vaishnavism. One such Acharya was Tiruvoimozhippillai (14th Century) born in the place where Nammalwar was born (Alwar Tirunagari). Thiruvoimozhi Pillai built a temple for Ramanuja (1017-1137) at Thirukurungudi and established a Chathurvedhimangalam in Ramanuja's name.

Vanamamalai Mutt was one of the two Vaishnava mutts in Tamil Country the other being the Ahobila Mutt. The Vanamamalai Mutt was established by Vanamamalai Jeer, a disciple of Manavala Mamunigal.

Pandya Art and Architecture

The standing examples of the Pandyan art and architecture in the district are the Malaiyadi Kurichi cave temple (built about - 637 AD), Nambi temple in Thirukkurungudi, Erichavudaiyar temple and Thirumoolanathar temple in Ambasamudram, Gopalaswamy temple in Mannarkoil near Ambasamudram, Manonmaneeswarar temple in Vijayanarayanan (Nanguneri taluk), Alagar temple in Seevalaperi (Tirunelveli taluk), Alagarkoil in Thirumalirumjolai, Tiruvaleeswar temple in Tiruvaleeswaram, Rajasimheswarar temple in Kottaikarankulam (Nanguneri taluk) and Courtalanather temple in Courtallam, all built between 800 AD and 950 AD.

The District under the Nayaks

Madurai Sultanate came to an end with the Vijayanagar Invasion against the Sultans in 1371 under Kumara Kambana. The Pandyas who moved southwards during Sultan's rule reigned small territories in the area now Tirunelveli district. The descendants of the Pandyas, had sway under the suzerainty of the Nayaks. The Pandyas came to be recorded in history as later Pandyas or Tirunelveli and Tenkasi Pandyas.

Though the Pandyas moved southwards, they tried to ascertain their old glory under favourable political condition but with little success. It is evident that Narasa, a Vijayanagar general had a victory over a Pandyan by name Manabhusha. This inference seems clear that the Pandyas who had retired to Tirunelveli made an effort either to regain their independence or increase their patrimony taking advantage of the difficulties in the Vijayanagar Empire around 1450 AD. [73]

The Nayak's Overlordship

The Nayakdom of Madurai almost dates back to the foundation of the Vijayanagar empire and Kumara Kampana may well be taken to be the first Viceroy. [74] After Kumara Kampana, the Viceroyalty of Madurai came into prominence under Lakkanna and Madanna, two brothers incharge of the whole Tamil country owing allegiance to Devaraya-II, the Vijayanagar Emperor. By 1440 AD Madana was known as the 'Lord ot the Southern Ocean' which indicates his overlordship in the district and far south. It is said that from 1404 AD to 1558 AD, 14 Nayak governors following Lakkanna were ruling the southern territory. The last Governor was Vithala.

During their rule, a vast irrigation work was carried out in the district. It is said that most of the dams across the river were constructed by the Nayaks.[75]

Viswanatha Nayak (1529-64 AD)

When the Vijayanagar Empire was in its hey days, the whole South India as far south as Kanniyakumari formed part of the Empire. The old rulers were not done away with and there were petty Pandya and Chola descendants ruling nominally in parts of their ancestral territories. By 1520s, the Chola chieftain invaded Pandya Chieftain probably ruling from Tirunelveli. Krishna Deva Raya, the emperor, did not tolerate aggressive war between two feudatories. He commissioned Nagama Nayak, one of his trusted generals who was in-charge of the peace maintenance in the south to remove the injustice done to the Pandyas by the Cholas but he hesitated to restore the Pandyas. His dealings with the Pandyas are not clear. But, disagreement arose between them which were brought to the notice of the emperor by the Pandyas. Krishna Deva Raya was much enraged at Nagama's insubordination. He deputed Viswanatha Nayak, Nagama's own son, to set right Nagama. Viswanatha caught his father Nagama Nayak as a prisoner or probably Nagama was recalled from the south through the diplomatic offices of his son. [76]

After conferring with the Pandyas and knowing the real facts from Nagama, the emperor realised that only the latter's solution was workable, since the former plainly admitted his inability to restore order in the country and govern the intransigent chiefs.So,Viswanatha was appointed Viceroy of the South with titles as the Chief of the Pandya country and Lord of the Southern throne.

Ariyanatha was Viswanatha Nayak's general and co-administrator to the Tirunelveli country to restore peace and order there. His task was by no means easy as he had to face with the hostility of the minor Chiefs who had strongly organised themselves in the country round Kayathar, were prepared to acknowledge 'no earthly superior'. They called themselves *Pancha Pandyas* (the five Pandyas) but according to some chronicles, they were descendants or feudatories of the old Pandyas and according to others, the illegitimate sons of the grandfather of Chandrasekara.[76] The inscriptions of the latter Pandyas are conspicuous by their total absence in the Madurai district even in the 15th Century.The withdrawal of the real Pandyas into the environs of Tenkasi perhaps brought into existence in Madurai many illegitimate claimants, mutually questioning their legitimacy.[77]

Ariyanatha had to subdue such illegitimate Pandyas or refractory vassal of the old rulers, who would not acquiesce in foreign rule His conciliatory methods failed and he requisitioned the help of Viswanatha who is said to have brought them round finally by his chivalry. Probably a compromise was arrived at and the minor chiefs were integrated in his 'Palayam' system.

About Achuta Raya's (Vijayanagar emperor) Travancore invasion Sathiyanatha Aiyar writes that it is not clear whether the campaign was undertaken in connection with this arrangement.[78] Perhaps the old Pandyas who had retired to Tenkasi instigated disaffection against the Madurai ruler. In any case, the campaign was meant to put down all the trouble from Tiruvadi who seems to have harboured enemies of Vijayanagar. Its successful conclusion removed for the time being all sources of trouble for Viswanatha. It appears that Tenkasi Pandyas became feudatory to Madurai and to cement the alliance probably a Pandya princess is said to have been given in marriage to Achutha Raya. Therefore, the imperial intervention (of Vijayanagar) seems to have been required for the final settlement of Tirunelveli. A Krishnapuram plate of Sadasiva says that Krishnappa Nayak, son of Viswanatha Nayak played a prominent role in the Tirunelveli settlement.

Soon after the conquest of Tirunelveli Viswanatha and Ariyanatha diverted their attention on the improvement of the country. The town of Tirunelveli was much enlarged and improved; temples were built, villages and streets opened and every convenience of the inhabitants was looked after. Agricultural interests were specially considered and irrigation schemes were undertaken. Every inducement was given for bringing the whole country under cultivation. Everywhere foundations of peace and orderly administration were laid and advantages of beneficent rule extended.

Organisation of Palayams

One of the important administrative measures taken by Viswanatha and Ariyanatha was the organisation of the district into 'Palayams' or 'Pollams' which later, under the British, played a vital role both for and against the British administration. After restoring peace and order, Viswanatha and Ariyanatha organised the whole country for effective administration. They had to take into account the old local chieftains who were the vassals of the Pandyas, the migrants from the north who had left their country either owing to threat of Muslim invasion or in quest of new pastures. Agriculture was languishing; the land was mostly covered with forests which endangered the safety and welfare of the people in many ways. Under these circumstancses, the Central Government by itself could not do much without entrusting large power and freedom of action to local authorities. The adventurous spirit of the new comers could well be diverted into peaceful activities if their ideas of self-importance were respected. Further, the defence of the country must be effectively provided for, to make united action possible in times of danger. Such political, economic and military motives probably influenced Viswanatha and Ariyanatha in instituting what is called the 'Palayam System'.[79]

The Chronicles speak of the division of the country into seventy two *Palayams* and of each Palayakkarar or Polegar being responsible for the defence of one of the seventy two bastions of the Madurai fort. It is not definitely known how many Palayams were originally set up by Viswanatha and how many were created by his successors.[80] It is found that later, some of them were confiscated. Perhaps these seventy two mentioned in the chronicles survived.[81] However, K.Rajayyan[82] opines that even before the arrival/of the Nayaks, there existed the Palayam system or a class of chieftains who drew their influence from the possession of the territories that they inherited or acquired.

Endowed with the combined military might, ceremonial splendour and political authority of Madurai, but, on a lesser scale Tirunelveli town became the southern provincial capital of the Nayaks.[83]In Tirunelveli stood the largest fort in the south, at Palayamkottai, the central temple, Nellaiappar Koil and the Governor known as the *dalavoy.* Ariyanatha Mudaliyar with whose able assistance Viswanatha set right the Tirunelveli problems, became the first *dalavoy* and which office became the perpetual patrimony in his family and hence, the part of the family name Medai Delavoy Mudaliar. The Medai Delavoy Mudaliars became one of the richest and most powerful families in the region and remained so for centuries.[84]

The Palayakkars ruled small kindgoms which varied in size from the tiny Sennalkudi, Kollankondan Urkadu and Kadalkudi to the vast Ettaiyapuram, Panchalamkurichi, Sivagiri and Chokkampatti. The Palayams that existed in the composite Tirunelveli by 1750 were 32 of which 18 were under the control of the Marava chiefs and 14 were under 'Vaduga' or Nayak chiefs.[85] The Marava palayams were Naduvakurichi, Settur, Kollankundah, Sivagiri, Elayirampannai, Ilayarasanendal, Avudaiyapuram, Talaivenkottai, Alagaburi, Chokkanpatti Surandai, Uttumalai, Kadambur, Maniyachi, Urkadu and Singampatti. The Nayak Palayams were Settur, Periyur, Sandaiyur,Pavaly, Elumadai, Sennilakkudi, Severelaptti, Mannarkottai, Golwarpatti, Ettaiyapuram, Nagalapuram, Kadalkudi, Alangurai, Melmandai, Kulatur and Panchalamkurichi.

Position of Tenkasi Pandyas under Viswanatha

The Pandyas of Tenkasi were Viswanatha's loyal feudatories and their power gradually increased under his fostering care. Their inscriptions during Viswanatha's rule were numerous. Viswanatha and Athiveerarama Pandya are mentioned in an inscription of 1558 AD and the latter was crowned Pandya King in 1564. Viswanatha's coins bear Pandya's emblem fish, No.16 of Hultzech's collection of coins has on the obverse the legend, 'Pandyas' and in the reverse, Viswanathan. Viswanatha's son Krishnappa

Nayak, must have continued the same policy of close co-operation with the Pandyas. Hence, perhaps his title, Pandya Kulasthapanacharya' in Krishnapuram Plates of Sadasiva has been inscribed.

Krishnappa Nayaka-I (1564-1572)

Kumara Krishnappa, the son of Viswanatha was crowned as the Nayak in 1564. Next year, the Vijayanagar Empire, the suzerain authority met with a disastrous defeat at Talaikottai. However, the Nayakdom continued in the south. Krishnappa in his initial years had to combat the rebellion of Thumbichi Nayak, a rebel chieftain. It is also said that he had invaded Srilanka.

Though the early years of the reign of Krishnappa Nayak seem to have been a very anxious period, he provided peaceful administration and progress. He is said to have built Krishnapuram, a town to the east of Palayamkottai and another called Kadayam Krishnapuram to the west of Tirunelveli.The former seems to have received greater attention from him. The Krishnapuram Plates of Sadasiva record the grant of a number of villages to the Thiruvengadanathar temple built there by Krishnappa Nayak 'encircled by a wall'. and a broad lofty tower with a large range - mandapa raised on a collection of beautiful stone pillars and adorned with rows of sprouts. 'He built a car. and also broad roads round the temple for God Vishnu consecrated there'. This Krishnapuram temple stands as a monument of the Nayak art and architecture. He is said to have built a Siva temple, constructed a 'Teppakulam' and several 'agraharas' and looked after the other needs of the town. Prof.Sathianatha Aiyar opines that *probably the town was built earlier, not necessarily in Kirishnappa Nayak's reign and was improved now.*

Krishnappa Nayak gave the country a strong and beneficent rule, which was badly needed at the time. He seems to have been a capable and wise ruler bearing the welfare of his subjects constantly in mind. His marked individuality and reputation would have ordered any rise of Ariyanatha's influence in Tirunelveli. He vigorously checked the evil ways of some of the Palayakkars and by his firmness and moderation taught them to respect to constituted authority. He died in 1572.

Virappa Nayaka (1572 - 1595 AD)

When Virappa Nayak was crowned as the ruler, Ariyanatha continued as the Dalavoy and Pradhani in name but there is absolutely no real evidence of his dominating influence. There is not even an incidental reference to him in inscriptions throughout the long reign of Virapa Nayak. Virappa Nayak seems to have had perfect control over his feudatories, the Pandyas of Tenkasi and the Tiruvadi. Inscriptional evidences say that he was the real master of his country.

Like his predecessors, he was loyal to the Vijayanagar Emperor. This is proved by the Cheramadevi inscriptions of Sriranga, Vijayanagar Emperor (1594), in which Virappa is mentioned as his feudatory. Virappa's Krishnapuram inscription of 1577 mentions Sriranga. In the Cheramadevi inscriptioin of 1578, he calls himself Sriranga's agent. Christianity began to spread in the country and Madura Mission had been founded. Virappa Nayak's comparatively long rule seems to have been a period of peace and prosperity.

Krishnappa Nayaka -II(1595 - 1601 AD)

Virappa Nayaka had three sons, Kumara Krishnappa, Visvappa and Kasturi Rangappa. He was succeeded by the eldest son also known as Virakrishna in September 1595. Ariyanatha, who had wielded power in the administration since the foundation of the Nayakdom passed away in the beginning of his reign. The Vijayanagar emperor Venkata-I was recognised as the paramount sovereign by Krishnappa Nayaka and by the Pandyas. The inscription of the Pandyas show that their power was increasing gradually under the Nayaks. Krishnappa Nayaka died in 1601

Muttu Krishnappa Nayaka : (1601-1609)

On the death of Krishnappa Nayaka-II, the throne is said to have usurped by his youngest brother Kasturi Ranga, the other brother Visvappa having pre-deceased him. But, within a week of usurpation, he was said to have been murdered and Muttukrishnappa Nayaka, probably the son of Visvappa had ascended the throne.[87] His reign was a peaceful one. He brought about a settlement of the Setupatis of Ramanathapuram. He continued to accept the suzerainty of the Vijayanagar Emperor. During his reign Robert-De-Nobili of Madura Mission began his conversion work. Muttu Krishnappa's dealings with the Missionaries reveal his broad minded toleration towards Christianity.

Muttu Virappa Nayaka-I (1609-1623)

Muttu Virappa Nayak is said to have eschewed his loyalty to the Vijayanagar Emperor and became independent.[88]. He shifted his capital from Madurai to Tiruchirappalli in 1616 .

Relation with the Tenkasi Pandyas

The Pandyas helped Muttu Virappa in his war against Thanjavur. Bishop Caldwell opines that Athivira Rama Pandyan was the last of the Pandyas and he must have died at the latest by 1610 AD.[89] Dr. Burnwell refers to a Sundara Pandyan as Ativira Rama's successor on the basis of a record of his in his thirteenth year (i.e.) 1622 AD. In fact no reliable inscriptional records of the Pandyas are available from the time of Muttu

Virappa Nayaka. T.A. Gopinatha Rao gives a list of the Pandyas which goes upto 1753 AD. A Jesuit letter of 1666 AD refers to the extinction, long ago, of the kingdom of Tenkasi.

On the whole, the Pandyas seem to have been loyal to the Nayaks of Madurai. They regularly paid tributes to the Nayaks. The Nayaks also allowed the Pandyas to rule peacefully without much interference. There are ample evidences to show that the Pandyas of Tenkasi survived the establishment of the Nayaks of Madura for nearly a Century. [90]

Tirumalai Nayak (1633-1659)

Tirumalai Nayak, the youngest son of Muttuvirappa became the ruler in 1633. After his ascendency he re-transferred the Nayak's capital from Tiruchirapalli to Madurai by 1634 AD.[91] His inscriptions are found in the district. He completely severed his connection with the central government (i.e.) the Vijayanagar empire.

In his early years he faced a series of wars in the east coast of the composite Tirunelveli district. There was also rivalry between the Portuguese and the Dutch and the king supported the former against the Dutch. The episodes relating to this form part of the history of Thoothukudi district. The Ettayapuram Palayakkars stopped paying tribute to Tirumalai and so he took away many territories under the control of the Ettayapuram Palayam. The enraged Palayakkars mustered an army and invaded Madurai. Tirumalai Nayak with the help of Raghunatha Sethupathi, defeated the palayakkars and put him in his place.[92] He had issued grants to many temples in the district. In the history of Medieval Art and Architecture of Tamilnadu, he occupied an important place as he was the builder of Madurai Mahal. He had renovated many temples in the Tirunelveli region.

The attitude of Tirumalai towards Christianity was sympathetic though Robert-de-Nobili and other missionaries faced persecution and had to leave Madurai. It is said that he loved and protected the Christian religioin. During internal commotion and foreign war, Tirumalai seems to have put strong check on the imprudent activities of the missionaries. He did not however favour them at the cost of subjects' loyalty.[93] In his dealing with the Chiristians. Tirumalai was mainly actuated by the most enlightened principle of freedom of conscience.[94]

Muthu Virappa Nayakkar -II (1659)

There was a dispute over the ascendency of Muthuvirappa-II. Kumara Muthu, who was elder to him but, illegitimate son of Tirumalai claimed the throne against Muthuvirappa. A compromise was brought about and Kumaramuthu was given the territories in and around Tirunelveli which he ruled from Sivakasi.[95]

Muthuvirappa-II transferred the Nayak's capital once again to Tiruchirappalli and he was busy to check the Muslim invasion from the North.

Chokkanatha Nayak (1659-1682)

Chokkanatha ascended the throne when he was only sixteen years old. Naturally the principal officers assumed real power and ruled the country in his name. The *pradhani*, the *rayasam* and the *dalavoy* apparantly formed a cabal and removed by exile or imprisonment all those who seemed dangerous to their interests. To avoid public scrutiny of their usurpation and as a blind to their real objects, they conceived the ambiticus scheme of an offensive war against the Muhammadans to establish the old political order of things and entrusted Dalavai Lingama Nayak, one of their trio with the execution of the scheme. Lingama accepted bribes from the Muslim generals and so did not attack them. Understanding this situation Chokkanatha skilfully handled the matter, murdered the rayasam and blinded the pradhani. Though Lingama went unpunished, he crossed over to the Marathas. Though Chokkanatha assumed office, there was chaos and confusion in the country for about four years. Cashing in on the state of affairs, the Dutch in the south (i.e.) composite Tirunelveli district enticed men and women by the bait of food and cloth. After they assembled in the shores they were forced into their ships and sent as slaves to be sold in other countries.[96]

Chokkanatha's weak foreign policy landed him in disgrace in his war against the Thanjavur Nayaks. As the popular feeling rose against Chokkanatha he was deposed on the plea of insanity and put in prison. His younger brother Muthulinga Nayaka or Muthu Alaga became the king. He also could not improve the administration and the nature's fury added to it and floods ravaged the country. Once again the popular anger turned against the government and utilising this situatioin. Rustom Khan, a military officer, usurped the power. He released Chokkanatha from the prison, made him the King but acting himself as the *defacto* ruler. This arrangement also could not improve the situation. The Mysore army which invaded the fort of Tiruchirappalli could not be checked. To bring about a healthy politics, some feudatory Nayaks united, killed Rustom Khan and freed Chokkanatha from his clutches.

The reign of Chokkanatha was a period of trouble and anxiety to his people whose miseries became more and more unendurable. It marks the beginning of the decay of the kingdom and forecast its impending fate.

Muthu Virappa Nayak-III (1682-1689 AD)

The failure of Chokkanatha to keep his dominion intact reduced the extent of the Madura Nayakdom. It was probable that the rising powers of

the Travancore kings off and on occupied Kalakad, Nanguneri, Shenkottah and Cheramahadevi areas in the district though they did not completely eschew the overlordship of Madura Nayaks. It is said that Umayama Rani, the Queen Regent of Travancore came to Tirunelveli and paid homage to Ranga Krihna Muthu Virappa- III with rich presents. During his rule John de-Britto of Madura Mission worked for the spread of Christianity in the southern districts.

Rani Mangammal (1689-1707)

On the death of Rangakrishna Muthu Virappa, his new -born child Vijaranga Chokkanatha was declared king and Mangammal, the child's paternal grand mother became the regent. The regency of Mangammal is remarkable for her careful stewardship of the affairs of the Kingdom. Her regency synchronized with a period when the Moghul emperor Aurangazeb was the master of the Deccan. Mangammal worked as a loyal subordinate to the Moghuls and utilised the imperial forces to some extent in dealing with her enemies.[97]

It is said that the Travancore King stopped paying tribute to the Nayak rulers. The king of Travcancore Ravi Varma seems to have taken advantage of the trouble of Madurai in the early days of Mangammal regency and refrained from paying tribute. Consequently, every year an army was sent to Travancore to collect the dues by force. The rising Travancore powers often had design on the border areas of the district in the west and the south west. The places Kalakadu, Shencottai and Cheramahadevi had association with the Travancore kings. It appears probabled that Mangammal's expedition to Travancore about 1697 was headed by Dalavai Narasappaiya. He was victorious and returned with rich tributes to the Nayaks court. The Sethupathis of Ramnad became independent before the end of Rani Mangammal's rule. Though the Sethupathis did not encourage Christianity Mangammal was friendly with the Christian Mission.[98]

Mangammal was described as *femme politiques*.Her vigour and diplomacy gave the Nayak Kingdom a longer tenure than it would otherwise have had. She was a famous road builder and many roads in the district were formed during her rule.

Vijayaranga Chokkanatha:(1706-1732)

He was excessively religious minded and unmindful of the kingly duties. He had made lavish grants of lands and villages to temples. Once in two years he is said to have moved with a large followers to Tirunelveli and other famous temples in his kingdom. He was too weak to control the destructive elements which had been eating into the vitals of the State for sometime past. He sealed the fate of the kingdom irretrievably.

Minakshi (1732-1736 AD)

Minakshi is the last ruler of the Madurai Nayaks. Internal strife and Chanda Sahib's invasion put an end to the two Century old Nayak rule in the district. Arcot Nawab, the Subedar of the Mughul emperor at Delhi sent an invasion against Minakshi, under his nephew Chanda Sahib who imprisoned the queen and declared Nawab's rule in the south. Thus came the end of a dynasty.

NAYAK ADMINISTRATINON

Local Government

Village was the lowest unit of administration. Several villages were grouped together and called 'Makanam'. Many, Makanams were combined to form 'Desam', 'Mandalam' or'Rashtra'. There are inscriptional evidences to show that the 'Makanams' were divided into 'Seemai'. Tirunelveli was better known as Tirunelveli Seemai. Roughly the areas now Tirunelveli and Thoothukkudi districts formed a 'Seemai' under Nayak administration.

There was no separate judicial department during the Nayak rule but there were Judges at the village level. The village revenue officer was designated 'Maniyakkarar' which post became hereditary and comtinued up to 1980 when it was abolished. One half of the produce was collected as tax to be paid in cash. Land tax constituted the major State income.

All the Palayams in the kingdom were the states within the State. Each Palayakkarar or Polegar levied taxes and out of it a share to the Central Government was given. Law and order, justice and other internal administration within the Palayams were looked after by the Palayakkars. The Nayaks did not need to spend much on army as the Palayakkars were duly bound to supply arms and armours whenever required by their overlord. There were also lands and regions directly administered by the Nayaks instead through Palayakkars. The crown lands though smaller in extent than all the Palayams put together, were more productive as Nelson [99] noted down. Distant and unproductive lands principally would have been given to Palayakkars. The Palayakkars paid one third of the produce they collected from the farmers as tribute to the Nayaks.

The chief item of expenditure seems to have been public works and charities. Large expenditure on temples for their construction and maintenance was made. Irrigation work consumed a large part of the government exchequer.

Social Life

The Nayaks tried hard to ensure peace and order in the country. But, in the latter period, some unruly Palayakkars began to harass people

when famine, pestilence and flood added fuel to the fire. Trade did not receive encouragement from the rulers. . In the erstwhile *Tinnevelly* district, however, the Dutch and the Portuguese conducted in foreign trade in pearl, salt peter and horses.

Nayaks continued the tradition of Hindu rule with religious tradition. With regard to the different sects of Hinduism, the Nayaks were equally tolerent. A proof for it can be seen from an inscription of 1731 which records a grant to a servant of the Tirunelveli Siva temple for the maintenance of worship as the deed is ornamented with Vaishnava figure. [100] Religion was actively fostered by the Nayaks who strongly believed that it was the duty of the state to safeguard and further the spiritual and moral wellbeing of the people.

The traditional structure of society was not disturbed by the Nayaks. The Brahmans enjoyed special privilege and were venerated. Their services were utilised for the welfare of the State. Their advice was sought for by the rulers in matters concerning internal administration. Generally, the Nayaks were very conservative in social policy. The caste system was considered sacrosanct. Inscriptions of 1623 in Brahmadesam and Ambasamudram [101] record the king's orders prohibiting, the five divisions of the Kammalar (artisan caste) from intermingling with each other. This bears evidence that the Nayaks strictly enforced the caste conventions then existed.

The foreign accounts say that the Nayaks kept royal harem and there were specific reference that Thirumalai Nayak had 200 wives. Professor Sathianatha Aiyar opines that it was due to the Muslim influence.[102] The foreign references that are available emphasize the fact that Sati was prevalent in the royal households.

The Nayaks encouraged education by issuing grants to Mutts and other institutions which imparted free education . Bishop Caldwell calls the Nayak's rule in the history of Tirunelveli as 'misrule hidden by shows'.[103] A.J. Stuart estimates the Nayak's administration in the district as follows. [104]

" A government whose wealth and whose tastes are manifested by the temples and statues of Tinnevelly and whose readiness to employ all its resources for the benefit of its people, as proved by the number and nature of irrigation works which it completed implies a contented and prosperous people; while a high state of arts and of knowledge is abundantly testified by the exquisite design and workmanship discoverable in many of the temples and statues as well as by the grasp and mastery of the principles of irrigation, complicated and difficult branch of the engineering art displayed in their irrigation system". R.Sathiyanatha Aiyar, in his monumental work, the History of the Nayaks of Madura has evaluated

both the remarks of Caldwell and Stuart and opines that the former is trenchent which 'exhibits utter lack of sympathy' and the latter is 'impartial'.[105]

Political Situation After the Fall of the Nayaks

In 1736, Chanda Sahib deposed the Queen Minakshi and usurped the throne of Madurai kingdom. But, it was not easy for him to subdue the palayakkars in the kingdom who were loyal to the Nayaks. The palayakkars in the kingdom opposed Chanda Sahib. The palayakkars of Tirunelveli assembled their forces at Sattur to resist the invasion of Chanda Sahib.[106] The National politics at the time was that the powers of the Bijapur and Golconda Sultans were put down by Aurangazeb who appointed Zulfikar Khan as the Nawab of South India with headquarters in Arcot. It was Chanda Sahib, the nephew of the Nawab, who exploited the situation in the south. Chanda Sahib sent an army under his brothers Buddha Sahib and Sadak Sahib to Tirunelveli for taming the palayakkars. The Nevayet (The name of the founder family of Arcot Nawabship. Later the 'Wallajah' family usurped the Nawabship from the Nevayets.) forces routed the palayakkars, took several of the chieftains as prisoners and shut them at the fort of Madurai. The crippled palayakkars occupied their forts and erected new out- posts with a view to keep the country under submission.

In the meantime, the aggrieved palayakkars approached the Marathas who were growing powerful in the western India, for help. The Marathas had already occupied Thanjavur which also faced the threat of Chanda Sahib's invasion. The Maratha king consented to help the palayakkars and sent an army under Raghuji Bhonsle and Fateh Sing against the Nawab, The army fought with Dost Ali, the Nawab killed him in Damal Cheri and marched to Tiruchirappali in 1741 AD. Chanda Sahib was taken prisoner and Murari Rao became the Governor at Tiruchirappalli. The Nevayet troops in Tirunelveli rallied to the aid of Chanda Sahib but they were intercepted at Manapparai and their generals, Budda Sahib and Sadak Sahib were killed in battle. Murari Rao sent an army under the command of Appaji Rao to the far South. He established his authority at Madurai.

The palayakkars of Tirunelveli who were imprisoned at Madurai fort by Budda Sahib and Sadak Sahib were released. The Marathas respected and guaranteed the rights of the palayakkars. The district returned to order.

When the Marathas were engaged in internal conflicts, the Nizam invaded Carnatic to re-assert Mughal dominance, came to an agreement with Murari Rao who vacated Tiruchirappalli accordingly. Asaf Jha, the Nizam made Kwaja Abdulla as Nawab of Madurai as well as the guardian of Nevayet prince Sadat-ullah-khan. The Nizam made no attempt, to

suppress the palayakkars. In 1744 AD, Kwaja Abdullah died and Anwar-ud-din was appointed in his place. The Nevayat prince was killed and though suspicion fell on Anwar-ud-din, the Nizam made Anwar-ud-din as the Nawab of the Carnatic. The new ruler founded the rule of his dynasty, the Wallajah.

Tirunelveli Under Arcot Nawabs

We may take 1744 as the commencement of the rule of the Nawab of Arcot in the district. After Chanda Sahib usurped the power from Minakshi, the Nayak Queen, the heir to the kingdom Vijayakumara established himself in Ramanathapuram and made alliance with local powers. The settlement of the country under the Wallajahs primarily depended upon them in subjugating the powers allied to the Nayaks.

Maphuz Khan's Expedition

In 1744 AD, the Nawab sent an army under the command of Maphuz Khan on a campaign of the far south for the suppression of the palayakkars and the Maravars who were allied with the Nayak prince. But, Maphuz Khan could not complete his mission as he was prevented by the Kallars on the way to Madurai. Mohammed Ali thereupon led a punitive expedition to the south in 1751.

Under the command of his brother Abdhul Rahim, an attachment of 30 European soldiers led by Lieutinant Innis also accompanied him for help. Probably, Lt. Innis was the first English man who had landed at Tirunelveli in 1751 AD. He successfully established his rule in Madurai and marched far-South, routed a confederacy of the Palayakars at Tirunelveli and destroyed about seventy of their mud forts. He levied contribution upon the Palayakkars, took several of them prisoners and secured a partial control of the country. [108] But, when on the way back to Tiruchirappalli, the Nawab was encountered and defeated by the Kallars, the Palayakkars regained their independence. No immediate step was taken to coerce the palayakkars. The only importance of the expedition was that it marked the first of a long series of compaigns undertaken by the Wallajahs for the suppression of the auxiliary powers of the south, the palayakkars.

Chanda Sahibs Expedition

Chanda Sahib who was languishing in Maratha prison secured his release by paying tributes. He sought the help of the French. There were then two claimants for Nizamship in Hyderabad. He supported one of the claimants,Muzaffar Zung who in turn recognised Chanda Sahib as the Nawab of Carnatic. Another claimant Naser Zung recognised Mohammed Ali as the Nawab of Carnatic. Muzaffar Zung and Chanda Sahib with the help of the French, captured Arcot. Mohammed Ali the Wallajah prince fled to Tiruchirappalli.

By 1749 A.D. Chanda Sahib sent an army under the command of Alam Khan to Madurai and Tirunelveli. Alan Khan expelled Abdul Rahim, the Governor of Madurai appointed by the Wallajahs and occupied the city. This was a significant victory for Chanda Sahib for he gained control over the rich provinces of Madurai and Tirunelveli.

Upon the conquest of Madurai, Alam Khan crowned Vijayakumara a scion of the Nayaks as the king of the country who exercised only nominal power. Alam Khan left Mudamiah in Madurai who served as the Minister for the Nayak prince who was not allowed to be the nominal head for long time. Mudamiah deposed him. The Maravars came in support of the prince but without success. The Vijayakumara abdicted the throne and fled to the jungles of Sivaganga in 1751.

In the Nevayet -Wallajah conflict for power Mohammed Ali, the Wallajah prince came out successful with the help of the British. But the Nevayet rule established at Madurai by Alam Khan went unchallenged for long as Mohammed Ali was engaged in the war with the Mysore ruler Nanja Rajah. After Alam Khan's death, Mudamiah, and Mohammed Khan Barkey ruled from Madurai.

Nanja Rajah invaded Madurai and captured it. But, the army wounded the sentiments of the public by its sacrileges and so, a rebellion broke out under Sethupathi. The rebellion stormed the fort of Madurai, expelled the Mysoreans and crowned Vijayakumara, the Nayak prince in 1752 AD. The Nayak rule did not last long as it was soon overthrown by the former Nevayet leaders.

The Maravars sought the help of the British to restore Nayak rule in Madurai. Now, the Nevayets in Madurai apprehending danger from the Palayakkars acknowledged the overlordship of Mohammed Ali. But, they also corresponded secretly with the Mysore King. Mohammed Ali ceded Madurai to Pratap Singh, the Thanjavur king. The Madurai Governors tried to bargain with the Thanjavur king too.

Heron's Expedition

Taking the troubles in Carnatic and in Madurai, the Travancore king annexed Kalakkadu, a portion of Tirunelveli Seemai with his kingdom. The palayakkars in Tirunelveli and Madurai did not pay tribute to Mohammed Ali. The Nawab also wanted to establish Wallajah rule in Madurai and Tirunelveli regions and hence, sent an expedition on 4th February 1755 under Col. Alexander Heron, Khan Sahib and Maphuz Khan, who commanded European, local and Wallajah forces respectively.

During this time, Pulithevar was the Palayakkar of Nerkattan Seval. He was exceptionally heroic and the first Palayakkar to take arms against the British in the South. The army under Heron and others approached

Madurai. The Nevayet governors in Madurai, Mudamiah and Nabi Khan Kattack fled to Tirunelveli where they joined Pulithevar.

Military operations against Palayakkars of Tirunelveli:

On 25th March 1755, the combined forces of Maphuz Khan and Heron marched from Madurai to Tirunelveli for the suppression of the rebellious palayakkars. The army expelled the Nevayet troops inTirunelveli and occupied their stronghold.

The task which faced the forces was how to assert the Nawab's overlordship over the powerful and numerous palayakkars of Tirunelveli. The Palayakkars in Tirunelveli were found remiss in settling their accounts and attached in their alliance with Miana or Mohammad Khan Barkay, the expelled Nevayet Governor of Madurai and Vijayakumara, the Nayak prince. Coercion seemed to be the only way open to the Nawab's army to bring the palayakkars into subordination. But, Maphuz Khan and Heron hesitated to employ violence for fear of adverse consequences. If the Palayakkars fled to forests deserting their Palayams, tax collection would become impossible.

The army of the Nawab and the Company advancing from Tirunelveli, stormed the fort of Nattukotai, the stronghold of the palayakkars of the district. Maphuz Khan and Heron slew not only the whole garrison of the fort but also some inhabitants to strike terror in the hearts of the pople. So ferocious indeed was this atrocity that several Palayakkars submitted, cleared part of their arrears and gave security for the payment of the balance. Raja Marthanda Varma of Travancore who had occupied Kalakkadu of the district withdrew his forces.[109]

Still many of the principal palayakkars of whom the most prominent were Kattabomman and Pulithevar refused to yield. The Palayam of Pulithevar was within the jurisdiction of the present Tirunelveli district.

Though Heron started his re-treat from Tirunelveli, Maphuz Khan, prevailed upon the General for undertaking an expedition against Pulithevar in whose Palayam Mudamiah and Nabi Khan Kattack, the deposed Nevayet Governors at Madurai, had taken shelter. He convinced Heron that the fort of Vasudevanallur belonging to the palayakkar was made of mud and hence, very vulnerable. Thereupon, Heron departing from the direct route, marched to Vasudevanallur, but to his surprise, he found it a strong and well built stone fort manned by more than 4000 men.[110] Still with a yonder hope that a settlement could be effected, Heron demanded the immediate payment of 20,000 rupees or else he threatened that he would batter the walls to pieces. The unperturbed Pulithevar, confident of his strength ignored the demand. This humiliation forced Heron and Maphuz Khan to the necessity of giving effect to their ultimatum. They

launched a vigorous attack on the rebel stronghold and made strenuous efforts to storm it; but, in vain.

In the absence of heavy cannon, it was found impossible to make a practicable breach. The troop of Pulithevar by gallant sorties, repulsed the attack. As nothing could be accomplished, Heron and Maphuz Khan abandoned the siege and retreated in humiliation. The army not only failed in suppressing most of the principal palayakkars but suffered serious reverses at the hands of Pulithevar and the Maravars.

Nawab Administration

At the commencement of the Nawab's rule in the district in 1744, the Nawab Anwar-ud-din appointed Anwar Khan as the 'Faujdar' and Amil of Tirunelveli.[111] He was succeeded by the duo, Mir Ghulam Hussain Khan and Hussain Mohammed Khan as the joint administrators from 1744 to 1749. When Anwar-ud-din was slain and Chanda Sahib rose up in the Carnatic, he nominated Alam Khan as the Amil of Tirunelveli Seemai who administered the district between 1750 and 1751. He was succeeded by Tirtarappa Mudali and Mudamiah, the agents of Chanda Sahib. Mudamiah was slain near Tirunelveli. After Heron's expedition Maphuz Khan became, the Governor at Madurai having jurisdiction over Tirunelveli Seemai. When Maphuz Khan nurtured an interest to become the independent Nawab in the south, it was thwarted by Yusuf Khan who re-established Mohammed Ali's supremacy in the district and consequently one Alagappa Mudali was appointed Amildar of Tirunelveli.

Tirunelveli Under Maphuz Khan

After Mohammed Ali's re-conquest of Madurai, Maphuz Khan was appointed the Governor. He was required to pay fifteen lakhs of rupees as the annual rent for Madurai and Tirunelveli provinces. Subject to this condition, he exercised absolute powers. He retained for himself whatever amount collected but paid only the fixed rent. By subletting the provinces, he received a huge sum as revenue and by subletting Tirunelveli, to Tirtarappa Mudali, he got an annual rent of Rs.17 lakh.[112] As per the arrangement made by the Nawab Mohammed Ali, to liquidate his debt to the Company, the Governor of Madurai had to pay half of the rent to the Nawab and other half to the Company.[113]

Maphuz Khan found many problems in the administration as he had to tackle the rebel palayakkars in the district. Kattabomman, Puli thevar, the Rajah of Travancore, the Maravars and the Kallars did not accept the overlordship of the Nawab. In the Tirunelveli Seemai, the western palayakkars under Pulithevar extended their sway over Nadumandalam[114] Kattabommaṇ of Panjalamkurichi annexed the adjoining villages. The Travancore ruler occupied Kalakkadu.

Pulithevar proposed a union of western and eastern palayakkars to restrain and contain Maphuz Khan. But the palayakkars of Panjalankurichi and Ettayapuram were reluctant to join as they had given asylum to the Nawab during Heron's campaign. Still most of the rebel Chiefs made common cause against the Wallajahs.

Though Maphuz Khan combined himself the prestige of being the elder brother of the Nawab and power of the Commander of the forces, he lacked resourcefulness needed for leadership as observed by Ananda Rangampillai in his diaries. [115] Despite, he had two advantages; the Palayamkottai and Madurai forts were under his control and the rebels were loosely organised.

Maphuz Khan granted certain villages to the Palayakkars of Ettayapuram and Panjalamkurichi and won over their co-operation. With their active support, Maphuz Khan droused away the Travancore king from Kalakadu. In March 1756, the ill-equipped rebels numbering about 20,000 assembled near Tirunelveli. On 21 March, a hard battle took place in which Maphuz Khan defeated the rebel force and killed their chief Miana. Though it was a considerable victory, he found it impossible to settle the country or to subdue the Palayakkars.

Yusuf Khan's Expedition

Yusuf Khan, also called Khan Sahib, was born in a Hindu family in Ramanathapuram, but embraced Islam and served under the French and the Nawab. Later, he entered the services of the British Army in the rank of Subedar. His perfect fidelity, intelligence and martial talents won for him the English. He was destined to play a significant role in the district in the succeeding decade. There is a village in the district named after him as Khansapuram, a corruption of Khan Sahibpuram.

Maphuz Khan's administration in Madurai was not satisfactory to the Nawab. He wanted to put an end to his brother's rule for which he sought for the military help from the British. Lord Pigot, the then Governor of *Fort St. George* deputed an army from Tiruchirappalli under the command of Yusuf Khan. Khan Saheb at the command of his troops arrived at Madurai on 6 April 1756. Leaving some of his men at the fort of Madurai, he left for Tirunelveli where he saw Maphuz Khan in a state of despair and destitution. The ravages of the Palayakkars were so wide-spread that Maphuz Khan found it impossible either to restore order or to enforce collection.[116]

Where Maphuz Khan had failed Khan Sahib won [117]. Khan Sahib led his army towards the small palayams killed the palayakkars and the fleeing people mercilessly. The rebels begged mercy, paid tribute and evacuated the circar territories. Among them were Pulithevar, the gallant

Chief who had never submitted to the Nawab anytime before and the Palayakkars of Sivagiri and Ettayapuram. [118]

Maphuz Khan looked at Khan Sahib with suspicion. He did not like to tolerate the presence of the Company troops inside the Madurai fort and Khan Sahib's direct dealing with the Palayakkars. Maphuz Khan came to Madurai and expelled the Company's troops left there by Khan Sahib.Arcot Nawab Mohammad Ali also resented Khan Sahib's interference in the administration of Madurai and Tirunelveli. He complained to the Company that Khan Sahib admitted his troops into Madurai fort, and collected taxes without authority. He urged the Company to recall Khan Sahib from Tiruneveli. Further, the Nawab asserted that the presence of Khan Sahib in Tirunelveli was no longer required and that his brother had money to pay the expenses of Company's forces. [119] But, Governor Lord Pigot justified Khan Sahib's action and refused to recall him.

Tartarappa Mudali

As per the agreement reached the Nawab and the Company had to share the revenue equally and it was required to appoint a renter acceptable to both. Tartarappa Mudali, a wealthy financier of Tirunelveli agreed to accept the rentership of Tirunelveli province for three years for a total rent of thirty lakh of rupees - 11 lakh for the first year, 12 lakh for the second year and 13 lakh for the third year. His knowledge of the details of revenue and his influence with the palayakkars made him adequately qualified to assume the administration of the provinces. Compared to the terms which Maphuz Khan accepted but never observed, this offer seemed unattractive. Nevertheless, Lord Pigot declared it reasonable perhaps more because of the necessity of preventing the Nawab from appointing his own nominee or allowing his brother to rule them because of the reasonableness of the offer. He promptly asked for the Nawab's consent to appoint Tartarappa as renter.[120] Being reluctant to accept the nominee of the Madras Council and hesitant to oppose the Company, Mohammad Ali directed his opposition against Tartarappa. He declared that Tartarappa was so unworthy a man to be trusted and renting the land to him was tantamount to selling it to the rebels.[121] In his reply to the Nawab, the Governor Lord Pigot asked whether the opposition of Nawab or his brother Maphuz Khan to the presence of Yusuf Khan as well as the appointment of Tartarappa was intended to prevent the Company from stationing anyone on its behalf to receive its share of collection. He suggested the appointment of a third person as the proper remedy to the impasse. The Governor, therefore, asked the Nawab either to accept Tartarappa as renter or to furnish adequate security for the Company's share of the revenue from the south. The Nawab now yielding to the demand accepted the terms. On 1st July, 1756 , Tartarappa assumed the management of the province under the joint orders of the Nawab as

well as the Madras Council. Lord Pigot posted Khan Sahib at Tirunelveli to render military support to the administration of Tartarappa.[122]

This arrangement was a breakthrough in the ascendancy of the British power in the south. While the Company by virtue of its financial aid to the Nawab for the defence of Tiruchirappalli had already obtained a right to a share of the revenue, now it added a right to the appointment of an administrator of revenue. While Yusuf Khan wielded military authority, Tartarappa obtained the control of revenue of Tirunelveli. This marks a victory for British diplomacy. The Nawab's right was restricted to his receipt of half of the rent fixed for the province.

Tartarappa created a machinery for the collection of revenue. He introduced an administration based upon village settlement, by which he held village headmen and the palayakkars responsible for remitting the rents settled for their respective villages. The chieftains welcomed the new arrangement, settled their accounts and paid tributes.

However, in practice , some difficulties arose. Tartarappa had to rely upon Yusuf Khan for military assistance in civil administration when needed. Yusuf Khan disliked the principle that the military forces were subordinate to the Civil administration. Khan Sahib also interfered in the civil administration and collected taxes at his will. Hence, Tartarappa stopped payment to the Company's troops and Khan Sahib seized the revenue collection of Tartarappa, confined him in his house of Tirunelveli for several days and harassed the revenue officials. He announced the settlement between Tartarappa and palayakkars invalid, entered into a separate settlement with them according to which the palayakkars had to pay taxes to him. He rashly executed the five officials of Pulithevar who came to Tirunelveli to pay the rent to Tartarappa. These highhanded proceedings held the authority of the renter in ridicule, drove the palayakkars to hostility and helped Maphuz Khan to organise resistance.[123] The Governor could not spend time to bring about a rapport between the General and the renter in Tirunelveli, as he was pre-occupied with the problems in Bengal.

Rebellion of Maphuz Khan

Maphuz Khan, with the support of Patan chiefs in Madurai, Barkataula, and Nabi Khan Kattack declared himself the Governor of Madurai. Nabhi Khan Kattack, appealed for the help of Hyder Ali, who as the general was then guarding Dindigul. Reva Sahib, the son of Chanda Sahib was also approached for help by the rebels. After assuming himself as the Governor of Madurai, Maphuz Khan issued orders appointing Barkataula as his deputy for Nadumandalam and Mir Jafar for Tirunelveli.[124]

Fearing that the French might exploit the situation, Lord Pigot wanted to reconcile with Maphuz Khan. John Calliaund, the Commander of British forces in Tiruchirappalli, on direction from Lord Pigot sent a peace mission to Madurai consisting of Ram Narain and William Rambold.

The emissaries prevailed upon Maphuz Khan to return to Arcot where they could see him placed in a suitable rank. Maphuz Khan refused and insisted the restoration of Madurai under his Governorship. Then the emissaries tried an intrigue by which they hired the Court 'sardars' to kill him. For the payment of sardars, the emissaries directed Tartarappa in Tirunelveli to bring money to Madurai. As there was some delay in this, the sardars were induced by Barkataula not to accept the offer. Finally Lord Pigot offered to pay Maphuz Khan, an annual subsidy of rupees two lakh which was also refused. He was neither willing to give up Madurai nor to pay the rent. Nawab Mohammad Ali on pressure from Madras Council recalled him. Outraged at this shocking disappointment, Maphuz Khan continued his preparation for asserting his independence in the south.

He won over the rebel palayakkars by giving them land. He ceded Wallanchinattam, Taravadi and Terembore situated near Madurai to Patan chiefs in return for their military aid. He allowed Kattabomman to occupy the Nawab's villages adjoining Panchalam kurichi, and the Rajah of Travancore to annex Kalakkadu.[125] The palayakkars who were against tyrannical Yusuf Khan, joined hands with Maphuz Khan. In January 1757, Maphuz Khan sent the Maravars to guard the northern borders of the district and he proceeded to Nelkattan Sevval, where Pulithevar had a fort. Maphuz Khan granted Alwarkurichi, Ambasamudram, Papankulam and Rangasamudram to Pulithevar and won his firm friendship. The rebels made Nelkattan Sevval as the hub of their operations. [126] In a bid to win the support of all the powers of South India, Maphuz Khan promised restoration of the country to the nayaks, though he did not define the status he would confer upon them.

Still there were disadvantages in the Maphuz Khan's organisation. The principal palayakkars of composite Tirunelveli district, Ettayapuram and Sivagiri did not extend their support to him. Many of the palayakkars who joined hands with Maphuz Khan were lukewarm and self interested.

Nevertheless, the rebellion broke out in January 1757. Rebel troops consisting of 1000 horses and 10,000 armed men sallied into the villages of Tirunelveli. Spreading desolation everywhere, they came to Panchalamkurichi where Kattabomman joined them. The irregular forces of Tartarappa fled and the administration collapsed. Maphuz Khan and Pulithevar summoned the neutral palayakkar of Ettayapuram to join hands with them but, the latter refused. Thereupon, he ravaged his territory

destroying the town of Ettayapuram. The rebels sent the spoils of plunder to Nelkattan Sevval. Yusuf Khan advanced from Srivilliputhur to intercept the convoy of the rebels but did not succeed. The Palayakkars of Wadagara meanwhile occupied Kadayanallur, Tenkasi and part of Sankarankoil. The Rajah of Travancore annexed Valliyur with his territory.[127]

With the spread of the rebellion, the major part of Tirunelveli slipped into the hands of Maphuz Khan and his associates. The troops of the Nawab and the Company, however, retained the control of few strong posts from where they struggled hard to check the progress of the rebels. The renter, Tartarappa collected taxes from the villages but only in competition with the rebel chiefs. Khan Sahib set up a post at Srivilliputhur and held control of the fort of Tirunelveli. With the aid of the Palayakkars of Sivagiri and Settur,. he repulsed the attacks of the rebels on his post at Alwarkurichi.[128] On 5th March 1757, he attacked a large body of the rebels who assembled near Alwarkurichi.In a fierce battle which started at 7.00 A.M. and continued till sunset. Khan Sahib inflicted a crushing defeat upon the rebels, killing 300 of them. Pulithevar lost two of his generals and the Palayakkar of Wadagara lost one of his legs. This victory enabled Khan Sahib, to take possession of Singampatti, a palayam of one of the rebel chiefs.

John Caillaud's Expedition

On 23 February, 1757, Lord Pigot sent an army under John Caillaud to put down the rebellion in the south and restore order. On the way, the army of Pudukkottai Raja also joined with the company troops and the combined army marched towards Tirunelveli. The Kallars sealed the direct route to Tirunelveli and so, the forces took a circular path enroute Ramanathapuram. On the rebel's side, there seemed a crumbling of cooperation as they sensed insecurity to them. Many rebels wanted peace and some to fight out the issue. Caillaud had spread a rumour that he had fought Maphuz Khan. The Caillaud forces reached Tirunelveli on 17 March where it joined the forces of Yusuf Khan and Tartarappa.

Caillaud spent a few days at Tirunelveli regulating the affairs of the province. He did not make any serious attempts to dislodge the rebels from Tenkasi, Uthamalai or Wadagara. The shortage of food materials and the onset of monsoon hampered the progress of his operations. Pulithevar and Barakataula urged Hyder Ali to rush his troops for which they offered to pay five lakh of rupees and to cede the strategic fort of Sholavandan, which commanded the high way from Tiruchirappalli to Madurai.

Caillaud and Khan Sahib withdrew their forces from Tirunelveli to Madurai. The rebels also advanced their forces to Madurai to prevent Madurai from falling into the hands of their enemies. On the way, the

forces were dispersed by the Sivagiri Palayakkar for trespass into his palayam. However, the forces re-assembled and marched towards Madurai. Caillaud, however, could not capture the fort of Madurai. Therefore, he retreated to Tiruchirappalli.

Though Caillaud re-treated to Tiruchirappalli, the rebel depredations in Tirunelveli and the military operations against the rebels of Madurai continued. Maphuz Khan and Pulithevar recovered the lost posts but, their attempts to storm the fort of Tirunelveli failed. Maphuz Khan was not able to win any decisive victory. Hence, he agreed to take the province on lease furnishing security as proposed by Governor early. Hearing this from Maphuz Khan, the Company sent Rama Nayak to Tirunelveli for settlement. But, the fickle minded Maphuz Khan went back on his words. He surrounded Rama Nayak and threatened him with death if he did not write to the garrison at Tirunelveli to surrender but Rama Nayak refused. When Maphuz Khan decided to execute Rama Nayak, the sardars in his court intervened and allowed him to return. A few days later, when a branch of troops guarding Tirunelveli fort left for Madurai, Maphuz Khan attacked the Tirunelveli fort and captured it. The rebels tried to attack Palayamkkottai fort where Tartarappa held his office. But, Tartarappa had the support of the palayakkars of Panchalamkurichi and Ettayapuram and hence, the Palayamkottai fort could be protected. Still the rebels retained control of most of the provinces ruling the country with as much violence and opression as they could.[129]

The rule of the rebel palayakkars continued in the south until there were differences of opinion among the chieftains. Captain Caillaud and Khan Sahib succeeded in winning the support of a few rebels to their side. They included the Maravars Mudemiah and the palayakkars of Settur. The palayakkars of Ettayapuram, Panchalamkurichi and Sivagiri were already the supporters of Tartarappa and Khan Sahib. Kattabomman furnished 1000 troops for service with Khan Sahib, while Mudemiah brought with him the Kallars of Natham. These defections considerably weakened the rebels. However, Pulithevar, Barkataula and Nabi Khan Kattack remained with Maphuz Khan in firm alliance.

Barkataula who successfully defended Madurai fort expected forces from Tirunelveli and appealed to Maphuz Khan. Maphuz Khan having no money made another futile attempt to obtain the rentarship of Tirunelveli.[130] Hyder Ali too did not help the rebels. Barkataula intended to surrender if the besieging army of Caillaud paid him Rs.12 lakh. But Captain Caillaud sought an unconditional surrender of the fort. Meanwhile Caillaud was informed of Hyder's advancement towads Madurai from Dindigul. Caillaud, therefore, made a settlement with Barkataula agreeing to pay him an amount of 1,70,000 rupees on 8 September 1757. The rebels evacuated Madurai and Caillaud took possession of the fort.

Maphuz Khan withdrew from the seige of Palayamkottai and retreated to western palayams.

Hyder Ali championing the cause of the rebels invaded Madurai in 1757. Khan Saheb rushed with his force to Madurai to check Hyder's invasion. As Khan Saheb was away from Tirunelveli there were no strong forces either of the Nawab or of the Company in Tirunelveli.Taking advantage of this situation the palayakkars of Nelkattum sevval, Wadagara, Settur and Ettayapuram took the head in gaining possession of circar villages. They even made ravages into the territories of the neutral loyal palayakkars and occupied Uthumalai. The further depredation of the palayakkars received a check with the return of the forces of Khan Saheb to Tirunelveli after the withdrawal of Hyder Ali from Madurai.

Meanwhile Tartarappa's rentership expired and the Governor called him to Madras to settle the account. As Tartarappa was ill, the settlement took place in Pudukkottai.[131] The Nawab by the end of 1758 appointed Hasan Mohammad Khan for the management of Madurai and Tirunelveli provinces. However the agreement made for the sharing of the revenue with the Company on an equal basis continued to be in force.[132]

Khan Saheb now took the initiative in settling the war torn country. He attempted to win the support of the Hindus. He wrote to the Governor to persuade Maphuz Khan to leave Tirunelveli. He observed that so long as Maphuz Khan was in alliance with the local Palayakkars, it would become impossible to collect the taxes peacefully. Lord Pigot in turn asked the Nawab Mohammed Ali to call back Maphuz Khan by offering suitable position in Arcot. Mohammad Ali sent his men to meet Maphuz Khan in February 1758. The men went to Nelkattumseval and saw Maphuz Khan residing in a hut made of straw and living a life upon what Pulithevar parted with. Maphuz Khan demanded the recall of Khan Saheb from Madurai and a grant of a district yielding two lakhs of rupees to him as the condition for his withdrawal from the alliance of the Palayakkars. The Nawab rejected the conditions of his brother and hence no settlement was arrived at.

Khan Saheb came to Madras to assist the British to lift the siege of Madras by the French General Lally. His absence was a blessing for Maphuz Khan and the palayakkars to expand their territories. In 1759, Khan Saheb was sent to Madurai as the Governor with the approval of the Nawab. He found that Maphuz khan and the Palayakkars had occupied all the territories from Madurai to Travancore. However Palayamkottai and Madurai remained with the forces of the Nawab and the Company. Maphuz Khan declared himself the Nawab of Madurai. His chief associates by the time were Pulithevar, Kattabomman and the palayakkars of Ettayapuram. In the earlier operation, Kattabomman and the Ettayapuram palayakkars were either neutral or supported Khan Saheb. Now they became allies to

Maphuz Khan who sought the help of the French, but it did not materialise as they were busy in Arcot fighting Carnatic wars. Maphuz Khan had no resources and he depended on the Palayakkars for money.

In Madurai, the Governor Khan Saheb had to re-conquer all the territories afresh. He subdued the Kallars and sent an army to Ettayapuram which was also subdued.Khan Saheb surrounded the western palayams. He reduced the posts of Uthumalai and Sorandai to submission. Pulithevar re-occupied Sorandai a few days later and Khan Saheb recovered it in the second assault. The victories of Khan Saheb curbed the agressive nature of the western palayakkars for the time being.

Khan Saheb returned to Tirunelveli and drew plans to expel the palayakkars of Wadagara and the Travancore king from the occupation of Circar territory. The palayakkars of Wadagara, a close associate of Pulithevar not only revaged the Nawab's territories but also carried his depredations into Travancore through the passes of Shenkottai. The enmity between the Wadagara chief and the Travancore king was exploited by Khan Saheb. He sought from the Travancore king assistance to conquer Wadagara which was granted. In September 1759 the combined forces of Khan Saheb and Travancore marched Wadagara. The Palayakkars fled to Nelkattumsevval. Pulithevar requested the Travancore king to withdraw his assistance to Khan Saheb and assured compensation for the losses he suffered due to the tresspass of the Wadagara Palayakkars into Travancore territories..

The clever Raja showed the letter to Khan Saheb and asked him to cede Kalakadu if he should continue his assistance. Khan Saheb yielded to the circumstances and gave Kalakadu to Travancore, but without the approval of the Nawab.[133]

On the 6 of November 1759, Khan Saheb supported by the Travancore forces invaded Nelkattum sevval. Khan Saheb also received further suporting forces from Trvancore and the Maravars. The combined forces sieged Vasudevanallur. Pulithevar and local inhabitants came to the rescue of Vasudevanallur. In the fierce battle that ensued, Pulithevar fought gallantly, but, both sides suffered heavy losses. Pulithevar lost 350 men and Khan Saheb 200. At this critical juncture a heavy cannon of the company burst and the war material in Khan Saheb's camp exhausted. The invaders re-treated and Pulithevar won the day's battle. It was due to the sheer gallantry of the palayakkars that they humbled the formidable forces of their enemy. Thus another endeavour of Khan Saheb to suppress the western palayakkars ended in fiasco.[134]

Withdrawal of Maphuz Khan

No doubt that the Vasudevanallur episode lowered the prestige of the Company and the Nawab to a great extent. Though victorious, the rebels also could not continue their fight. Khan Saheb established his power in Tirunelveli except for the portion of the western palayms. The rebels were disappointed as they could not achieve anything profitable. In July 1759, when Khan Saheb was continuing his military operations Maphuz Khan sent messages to Lord Pigot conveying his desire to enter into a settlement with his brother.[135] He communicated his idea of evacuating Madurai in favour of Yusuf Khan also. The conditions for his withdrawal were ceding a district to him for his support, granting of Ambasamudram and Rangasamudram to Pulithevar and recognition of Wadagara as a Palayam.

The Nawab accepted his personal demand but refused any concession to the palayakkars. Khan Saheb intervened and brought about a settlement. In March, 1760, Maphuz Khan left the camp of Pulithevar and on the 14th April, he arrived at Tiruchirappalli.[136] He then proceeded to Madras where he joined his brother though he could not get the specific concession as promised by his brother.

The rebellion of Maphuz Khan left the district's economy in very bad shape. People groaned under heavy taxation levied both by the Nawab and by the palayakkars. Failure of monsoon added fuel to fire. The authorities were only after taxes and they did nothing to repair water courses, tanks and other works to facilitate irrigation for agriculture. The wandering troops lifted cattle from the villages, and took away the concealed grains inside the houses. Such was the havoc wrought every where in the district and people began to flee to jungles deserting their villages. Khan Sahib himself wrote this condition of the district to the Madras Council. [137] "This country is involved in troubles night and day, in so much that I may venture to say, it is inhabited rather by devils than men". In another letter, Yusuf Khan writes, "when a disturbance on one side of this country is quelled, there arises a fresh one in another. It appears to me that Providence ordained the province to be a source of troubles. May God protect it in every respect. I am night and day under arms, ready to fight and oppose and am not at leisure even an hour....." For want of heavenly blessings (Agno) aches and Feavers (fevers) have regard in every place in the fort of Madura and Tinnevelly Country, so that, all the people are dieing (dying) of it. Gods (God's) wrath is such in His point that it is impossible for me to express it rightly to you". [138] These letters of Yusuf Khan stands as an evidence of the misery endured by the people of Tirunelveli in 1750s.

Tirunelveli Under Yusuf Khan's Administration

Lord Pigot appointed Yusuf Khan (or Khan Saheb) as the Governor of Madurai in July 1759 with the reluctant approval of the Nawab. Though for a year initially, his term was extended for three more years. Khan Saheb's obligations to the Company and the Nawab were to pay five lakh rupees as rent for the first year, nine lakh rupees for the second year and ten lakh each for the remaining two years. The appointment of Khan Saheb increased the Company's influence in the district. The English who already obtained share of the revenue from the district, now secured the appointment of their own servant in the governorship.

The Eastern and Western Palayakkars in Tirunelveli

Certain circumstances helped the palayakkars to organise themselves against the Company. The victories of Pulithevar in December 1759 bolstered up the hopes of the rebels and set in motion fresh waves of disturbances.[139] The Dutch fearing danger to their commercial activities in the district due to growing East India Company's influence there, offered help to the rebel palayakkars of Tirunelveli. Hyder Ali and the French also were in a position to aid the palayakkars. These factors contributed to the formation of hostile coalitions, the eastern and the western. While Kattabomman led the coalition of the eastern palayakkars and the Dutch,[140] Pulithevar led the coalition of the western palayakkars. The eastern palayakkars were of Telugu origin while the western palayakkars were of Tamil origin. These linguistic differences caused the non-cooperation between the two groups.[141] The eastern palayakkars were supported by the Dutch while their western counterparts were helped by Hyder Ali and the French.

The provincial eastern palayakkars were the chiefs of Panchalamkurichi, Ettayapuram, Kulattur, Mailmandai, Maniachi, Kadalgudi, Nagalapuram, Sattur and Kolarpatti. The area of all these palayams are now in the jurisdiction of the present Thoothukudi and Virudhunagar districts. The important western Palayakkars were the chiefs of Nelkattan sevval, Sivagiri, Wadagara, Singampatti, Uthumalai and Surandai. All these Palayams were in the area now Tirunelveli. district.

Defence of Pulithevar

In December 1760, Khan Saheb began his operations against the western Palayakkars. On 19 December, he entrenched himself within three miles of Nelkattansevval. The next day Pulithevar attacked the forces of Khan Saheb but withdrew as hundreds of his men fell in the battle. Khan Saheb continued the siege for about four months. When further forces arrived in April 1761, Khan Saheb moved the trenches

close to the walls of the fort. He captured a hill from the summit of which one could have a clear view of the fort. This was a disadvantage to Pulithevar. Khan Saheb posted batteries on hill tops and charged the fort with cannon for several days without interruption. He curbed the communication of the fort with outside and made the garrison inside immobile. Unable to withstand the ordeal or to obtain re-inforcement Pulithevar surrendered on 16 May 1761.[142] Soon after this discomfiture, the rebels evacuated the other strongholds of Panagaur and Vasudevanallur. Khan Saheb magnanimously permitted his gallant enemy to escape to the woods of Ramanathapuram.[143] Khan Saheb suppressed the other palayakkars. He demolished 29 mud forts and garrisoned 45 other forts with his troops. The success of the operations restored order in the land.

Shrewd strategy of Yusuf Khan and the non-cooperation between the hostile palayakkars and among the anti-British groups enabled the governor of Madurai to disperse the two hostile coalitions and to expel the Mysoreans. His task was rendered easy as none of the rebel powers with the exception of Pulithevar decided on a determined resistance. The net result was that Pulithevar a determined and gallant chief had to bear the brunt, went down fighting.

Pulithevar - An Estimate

Though humiliated and humbled ultimately, Pulithevar remains one of the illustrious figures in the chequered history of palayakkars. The vivacity of his character gave him an ascendancy over the western palayakkars, while his determined resistance to the Nawab's overlordship made him a potential enemy of the Wallajahs. He was in fact the principal architect of the coalition of the palayakkars organised against the Nawab. Despite his command of slender resources and an irregular army, he never hesitated to fight a powerful enemy. His cool strategy was as remarkable as his daring gallantry he displayed in fighting the large columns of armed forces. The last defence of Nelkattumsevval for five months, was in keeping with his valour, but, its collapse was inevitable because of the overwhelming odds he had to face and due to the perseverance of an equally gallant general Khan Saheb. The victory of Khan Saheb which led to the crushing of the palayakkars resistance, was one of his exemplary achievements. The Nawab acknowledged his victory by presenting him with a gold plate and sword.[144]

Pulithevar may be regarded as the first south Indian ruler who sowed seed by his gallant resistance to expell the foreigners from the soil. His services to the nation is honoured in many respects and the government of Tamil Nadu has erected a memorial for him in Nelkattumsevval where there is the remnents of his palace.

Administration

Yusuf Khan initiated some measures to improve the economy of the war shattered country and to restore the suspended cultivation. He encouraged the rehabilitation of villages deserted during the disorders. He advanced money for cultivation, repaired the water courses and rebuilt the gutters with stone. He cleared the forests to bring more lands under cultivation.[145] For encouraging trade and commerce, he built rest houses for the stay of the travelling merchants. The rest houses were maintained by the village councils. He offered security to the travellers. He gave protection to the businessmen against exaction, helped the weavers by granting them loans and trained the people in the manufacture of gun powder and other war materials. In addition, he attempted to conciliate the Hindus by giving grants to temples and reviving the performance of rituals in places of worship. He had conviction that the labourer and the manufacturer should be the favourite children of the state as they afforded strength and comfort to the public.[146]

The administration of Khan Saheb was marked by efficiency as well as rigour. His justice was harsh and the guilty were not spared under any circumstances. While his word was unalterable, his measures were properly combined and firmly executed. He himself discharged his obligations with alacrity. His regularity in the collection of revenue and his punctuality in the remittance of rent to the Company were commendable.[147]

> *His policy towards the Palayakkars and the Maravars was unambiguous. He said "Let them become Zamindars and cultivate their own lands instead of plundering their industri ous neighbours, then they shall be cherished, but, while their habit is idleness and their business devastation, I will treat every one as a public enemy, who wields a pike or wears the turban of a Palayakkar".*[148]

Renewal of Confederacy, 1762

Peace in the district was short lived as the palayakkars of Sivagiri, Wadagara, Panchalamkurichi and the Travancore king formed a confederacy in 1762 against the Nawab. The formation of this confederacy marked a natural reaction to the growing influence of Khan Saheb. The confederacy was headed by Travancore king Dharma Raja who had trained his army by the Dutch General De Lennoy. In November 1762 a division of confederacy under Dharma Raja with the assistance of the Palayakkars of Panchalankurichi occupied the territories in the south western border of the district. Another division under the Travancore prince

with the reinforcement of the troops of Wadagara and Sivagiri palayakkars occupied Shenkottah and invaded Wadagara held by the troops of Yusuf Khan.[49] Khan Saheb returned from Madurai with his troops to Tirunelveli. He successfully contained the forces of the confederacy in Shencottai and made them retreat. But the Travancore king defeated Khan Saheb's forces in Kalakadu before his arrival there. Khan Saheb had to wage a tough fight for about a year to retrieve Kalakadu from the Travancore troops in February, 1763.

Khan Saheb as a retaliatory measure invaded Travancore and terrorised the country. The Raja sought the help of the Nawab assuring him all his assistance in future . A treaty was signerd according to which Kalakkadu was given by Khan Saheb to Travancore King on the implicit understanding that the king would assist him in his proposed rebellion against the Nawab. But, the king assured Nawab all his support in the suppression of Khan Saheb.[150]

His unauthorised proceedings including his treaty with the Travancore King excited the suspicion of the Nawab and the Madras Council.Khan Saheb did not consult either the Nawab or the Governor before taking decisions in important proceedings. Hence, the Nawab asked Lord Pigot to make Khan Saheb responsible to the Nawab. Lord Pigot directed Khan Saheb to pay the rent directly to the Nawab which symbolically meant that Khan Saheb was not a Company representative but Nawab's man. Khan Saheb did not obey the direction of Lord Pigot and stopped paying rent either to the Company or to the Nawab. Subsequently Lord Pigot recalled Yusuf Khan. Khan Saheb evaded obeying the order of Pigot saying that he had to contain the Travancore forces. The British decided to send military forces against him while Khan Saheb desired to face it with the help of the French and Hyder Ali. The Nawab said that Khan Saheb had prepared his rebellion since the early months of 1763. He repaired the Madurai fort and recruited men for his army. In an attempt to win the support of the Hindus, he announced his intention to restore the country to the Nayaks and himself to serve as minister.[151]

The French help reached Yusuf Khan and the French flag was hoisted in the forts of Madurai in March 1763.[152] But when the news of the end of Anglo-French hostilities in Europe by signing the Treaty of Paris reached in August 1763, the French withdrew their official support to Khan Saheb. As expected by Khan Saheb he could not get assistance either from Hyder Ali or from the local powers. Lord Pigot promptly supported the Nawab against Khan Saheb. Lord Pigot viewed the French help to Khan Saheb seriously.

Military operation took place in Madurai. Khan Saheb was arrested on 13 October 1764 after his surrender, Mohammad Ali hoisted his flag at

Madurai fort on 14 October 1764. On 16 October Khan Saheb was executed.[153] This was the cruesome end of the rebel commendent. Col.Camphell who had conducted the military operation in Madurai, came to Tirunelveli on 23 October and the rebels surrendered the fort of Palayamkottai. This acquisition completed the victory of the Nawab over the revoltionary palayakkars.

Kalakadu was a bone of contention for many years between the Nayaks and the Travancore kings and later between the Nawab and the Travancore rulers. Miana when he ruled Tirunelveli ceded Kalakkadu to Travancore but Maphuz Khan regained it. However, during the administration of Maphuz Khan, the Rajah again occupied the district. Subsequently in 1759 Khan Saheb ceded it to Travancore in return for the Rajah's assistance against Pulithevar. Lord Pigot approved the cession but the Nawab opposed it. When the Travancore war broke out Khan Saheb re-conquered the district but restored it to the Rajah in consideration of obtaining aid for his rebellion.

After the rebellion was quelled, the Travancore Rajah requested the Nawab to issue a 'Sannad' granting him the 'district ' of Kalakadu and Wadagara and free him from the obligation of paying tribute. In return,. he assured his firm alliance to the Nawab. Nawab ignoring the request, found Rajah guilty of stopping the payment of tribute. Nawab sought the help of Lord Pigot, to invade Travancore. The Madras Council feared that their trade interest in Travancore might receive a set back if they resisted against the Trvancore King. Meanwhile sensing the Nawab's move, the Rajah vacated Kalakadu in October 1764. Subsequently, when the Nawab's forces in Tirunelveli was withdrawn, the Travancore forces reoccupied Kalakadu. When Donald Campbell marched to Kalakadu, the troops of Travancore retreated.

In December 1764, the Madras Council sent John Call to Travancore to settle the dispute, on the request of the Nawab. The negotiations failed as the Rajah rejected Nawab's claim of tribute and asserted his rights over Kalakadu. In May 1765, the Travancore king invaded Panagudi, Kalakadu and Shencottai- all in Tirunelveli Provinnce.[165] Donald Campbell marched to Kalakadu again and the invaders retreated.

To ensure peace on the border, an amicable settlement was necessitated relating to Kalakadu. In December 1766, representatives of both the Nawab and the Rajajh conferred in Palayamkottai. According to the peace settlement, western ghats became the border between Travancore and Nawab's territories. The Nawab gave Kanniyakumari and Shencottai to Travancore. In turn., the Rajah of Travancore abandoned all his claim over Kalakadu and made payment to the Nawab for the grant of Shencottai and Kanniyakumari to him. The Rajah of Travancore also agreed

to pay annual tribute to the Nawab with four thousand Travancore chakrams and an elephant as it was the practice during the reign of the Nayaks.[156] In making this settlement, the Nawab enforced the political rights which he had inherited from the Nayaks and Nevayets.[157]

Re-Union of Palayakkars

The forces of the Nawab and the Company withdrew from the south when the Anglo- Mysore wars broken out. The amuldars of the Nawab in Tirunelveli oppressed the palayakkars by exacting taxes. Hyder Ali's emisarries incited palayakkars against the Nawab and the Company. All these factors led to the assemblage of 20,000 armed men hailing from the western palayams at Vasudevanallur, once captured by Khan Saheb. They cut off Nawab's communications with Tirunelveli. Kattabomman took the Circars posts in the eastern reign while Miana organised the Kallars against the Wallajahs.

Major William Flint with an army marched towards Sivagiri and attacked Kollamkondan on 25 December 1766. He met a strong opposition and so he had to retreat to Rajapalayam. His attempt to storm Ettayapuram with the additional troops from the Nawab also failed. His attempt at Panchalankurichi in February 1767 also landed him in heavy loss of men.

Donald Campbell led the expedition of the Wallajah and the British forces in April 1767 against Kollamkondan. Campbell occupied Sattur on 3 May. The fort of Sivagiri was besieged on 10 May. The palayakkars and the people deserted the town and escaped into the dense forests. Campbell occupied Sivagiri and followed up his victory with the reduction of Vasudevanallur, Singampatti, Talaivankottai and Madacola into submission. He advanced to the hills of Sivagiri but finding it dangerous, retreated to Sankarankoil.

Campbell came to know that the oppressive revenue policy of the Nawab was the main reason for the non-cooperation of the palayakkars. For instance, when the palayakkars of Sivagiri paid a tribute of about 18000 chakrams for the entire period of Khan Sahib's administration for seven years, he was required to pay 33000 chakrams by Mohammad Ali for the year 1765 alone.[157]

To avoid threat from Palayakkars during Hyder Ali's invasion, Campbell felt it essential to come to terms with the chiefs of palayams. Accordingly, he restored the Palayams of Sivagiri, Sattur and a part of Wadagara. Though peace seemed to have appeared, the palayakkars stopped the payment of tribute after the return of Campbell and his army.

Hyder Ali's Expedition

When the first Anglo-Mysore war broke out in August 1767, Hyder Ali sent Fazl-ulla-khan to the far south with an army. When Fazl-Ulla-Khan reached Tirunelveli, the palayakkars joined with him. The combined palayakkars-Mysore army occupied Srivilliputhur, Rajapalayam and Vasudevanallur while Hyder Ali was exploiting in and around Tiruchirappalli. The incursions of the forces of Mysore and the palayakkars coupled with the oppressive exactions made by the Nawab's amuldars caused widespread havoc in the country. The invaders mercilessly pillaged the towns and the inhabitants. The revenue officials or the amuldars freed from any control exacted money ,seized cattle and plundered the people. It is stated that about one fourth of the population died of starvation and one fourth fled to the jungles or to the palayams.

Hyder Ali's Revisit - 1780

Hyder Ali formed a confederacy with the Marathas and the Nizam to oppose the English in the Carnatic . Hyder Ali's forces, after a futile attempt to storm Tiruchirappalli, advanced to the south, taking Sholavandan, Tirunelveli, Palayamkottai and Vasudevanallur. The troops of the Nawab in Tirunelveli and other places showed no resistance. The Mysore Chief enthroned a Nayaka heir as the ruler of Madurai region. The Nayak prince was referred to as Kattu Rajah.Waren Hastings, the Governor General offered to cede the Tirunelveli province to the Dutch with the Nawab's suzerainty undisturbed.

The Dutch readily accepted the offer of Warren Hastings. When a treaty was signed in this regard between Hastings and the Dutch, without the approval of the Nawab, the Madras Council opposed it; as Tirunelveli was the only district which yielded substantial revenue to the Company.

The outbreak of Mysore war offered a splendid opportunity to the palayakkars to throw off the mask of loyalty. The Nawab's policy of annexation of the palayams, imprisonment of the chieftains, their sympathy for the Nayaks and the influence of Hyder Ali, all these factors worked together to induce the palayakkars to create disturbances.[158] Mohamad Ali attempted to prevent the palayakkars from joining hands with Hyder Ali by offering them certain eleventh hour concession like, waiving two years *peishcush* and releasing the palayakkars prisoners . But these concessions did not evoke any response from the palayakkars.

The uprising of the palayakkars broke-out-when the chiefs of Udayarpalayam and Ariyalur (Tiruchirappalli district) supported Hyder Ali and the palayakkars of Sivagiri and Panjalamkurichi went over to the camp of Nayak prince. Kattabomman entered into a close alliance with the Dutch and a Dutch flag was hoisted in Panchalankurichi fort. On the other

hand, Varaguna, the palayakkar of Sivagiri assisted by the western palayakkars defeated Nawab's detachment led by James Edington and occupied Srivilliputhur. The consequence of the rebellion was horrendous. The palayakkars destroyed the crops and the water courses. The inhabitants who escaped slaughter and sought shelter in the forts perished of starvation. The few villages which survived the ravage of war fell a prey to the tyranny of the renters, amuldars, tahsildars and other instruments of public exaction.

Indeed the inroads of the invaders, the exactions by the amuldars and the horrors of famine left the country ruined and large areas depopulated. However peace returned after the Treaty of Mangalore signed in 1784 between Tipu Sultan and the Company after the death of Hyder Ali.[159]

The Assignment

The East India Company asked the Nawab of Arcot to compensate the war expenses it had incurred in the Carnatic. As the Nawab was not able to pay the amount, he complied with the request to make over the revenues of Tiruchirappalli and Tirunelveli. The Nawab should have consented either because he found it impossible to collect taxes or because he did not fully grasp the implications of the Company's intervention.[160] By an agreement made in February 1781 the Company appointed receivers in Tirunelveli and Tiruchirappalli provinces for the collection of the net revenue from the Nawab's amuldars. These receivers, however, had no right to interfere in the internal administration. In effect the receivers were entitled to exercise supervision over tax collection charges , but lacked the powers essential for control. Therefore, it was natural that the system did not work.

The Board of Revenue was not then in existence A committee was appointed by the Government on 16 October 1781, called the Committee of Assigned Revenue, consisting of six officers including George Proctor, the first civil officer appointed to Tirunelveli , for the purpose of receiving and administering the revenues of the Nawab. The members of the committee were first called receivers and then Superintendents of Assigned Revenue, shortly Superintendents. They were the forerunners of the future district collectors.

The First Collector

It is right to call George Proctor the first collector of Tirunelveli district. (1781-83) He was assisted by Orpen, a military officer. The Nawab issued orders to his *faujdars* and *amuldars* in Tirunelveli directing

them to obey the British official. In 1782, Sivarama Talaivan a palayakkar built a fort at Thirukkurungudi and exploited the ryots of the neighbourhood. His depredation was checked by the Company.

Proctor's Administration

The renter of the district Tirumamalaiyappa Mudali, on the advice of Capt.Gibbings raised the prices of the grains of the Company government. Hence, Proctor wrote to the Committee at Fort St.George to appoint a new renter who could heed to his directions. He suggested either Tirtarappa Mudali, the nephew of the present renter or Ranga Rao, an amuldar in Madurai. At the same time the renter Tirumalayappa Mudali also made a complaint to the committee against Proctor. There was also a misunderstanding between Capt.Gibbings, the commanding officer in Tirunelveli and Proctor. The committee found fault with Proctor's management and re-called him. He was succeeded by Irwin in January 1783. Two Assistants, Torin and Kindersley were also appointed. On his arrival, as per the direction of the Company government, Irwin conducted an inquiry about the complaints against Proctor. The court considered Proctor's accounts unsatisfactory. It was found that he had entered in his accounts many items of expenditure of a personal nature without the authority of the Government. It was also found that balances of receipts of revenue still remained in his hands. Hence, the recall of Proctor was, therefore, considered appropriate.

Irwin's administration

Irwin found many obstacles in Tirunelveli for effective collection of revenue. The foremost he experienced was from the refractory palayakkars. The Palayakkars of Melur and Sivagangai. had already been tackled.Kattabomman of Panchalankurichi, in the meantime, was caught in a conflict with the palayakkars of Chokkampatti. About, 14,000 men under Kattabomman's command laid siege to the Chokkampatti fort. The Dutch also helped the palayakkars. The British force under Col.Fullarton was then in Sivagangai. Kattabomman expected its arrival at Chokkampatti. But, Fullarton keeping his real destination perfectly concealed and taking a circuit route descended on Panchalamkurichi. Kattabomman hurried back to defend his fort. After a tough fight, the British troops withdrew. As the fort was not safe, Kattabomman and his men sallied out and went to safer places. The British army occupied the fort in 1783. Fullarton's effort to bring Kattabomman into an agreement failed. Kattabomman had formed a confederacy in which Varaguna, the palayakkars of Sivagiri also joined.

Fullarton then thought it was essential to suppress Sivagiri at first in order to convince all the Western Palayakkars of the dreadful consequence

of defiance. During the Mysore war, Varaguna killed Captain Graham Campbell and cut off his detachment. Now, in alliance with Kattabomman, he refused the payment of tribute and made vigorous preparations for resistance. So, Fullarton was all set to comfort the Palayakkars of Sivagiri. Determined to fight, the Palayakkars retired to the thickets, four miles deep, and deployed 11,000 men of their army against the beseigers. The British troops on the otherhand, took possession of the town of Sivagiri and unhesitatingly carried the operations to the forests. The Sivagiri troops fought heroically but unable to hold the ground before superior fire power and hence, retreated to the mountains. Fullarton captured the strong embankment, well-manned by the palayakkars' troops and employed his pioneers to cut a road through the inaccessible forests. A road three miles long having been completed, the forces reached the foot of the hills occupied by the palayakkars. The troops of the palayakkars thereupon climbed up the cliffs and took their position. Baffled by insurmountable obstascles, the British forces saw their task arduous . At this juncture, the palayakkar of Chokkampatti taking service with the Company's troops discovered a secret path, reached the summits of the hills and surpirsed the Sivagiri troops . On seeing their enemy, the Sivagiri troops were in panic and fled to different directions. The result was that both Panchalamkurichi and Sivagiri came under the control of the Company. Fullarton after establishing few posts in Sivagiri, encamped at Srivilliputhur, ready to make agreements with the palayakkars. But, the rebel palayakkars offered no terms of settlements. Faced with a renewal of hostilities Kattabomman and Varaguna later offered 30,000 chakrams each in lieu of all the previous claims the Company had and bonds for 15,000 pagodas for the restitution of their forts.

Surrender of the Assignment

In the year 1785, the British Government surrendered the 'Assignment' to the Nawab of Arcot by a treaty which stipulated terms of payment of the debt by the Nawab to the company. As the surrender was seemed inevitable, Irwin wrote to the Government to exempt the districts of Madurai and Tirunelveli for a few months. But, the surrender took place before his letter reached the government.[161]

BRITISH ASCENDANCY

Temporary Collectorate of Tirunelveli Province (1790-1808)

The year 1790 marked a new dimension in Tirunelveli province. That year the Madras Government made a proclamation without getting approval from Mohammed Ali, the Nawab of Carnatic. By that Proclamation the Nawab's territory came under the direct control of the British.[162] This

process known as 'Assumption' made the British authority strong in Tirunelveli. It led to the formation of a temporary collectorate at Ramanathapuram for the management of the *'peshkush'* or tribute from the southern palayakkars .

As a part of the process of Assumption, a new Board of Assumed Revenue was created for revenue management.[163] In order to manage the revenue of the Southern Palayakkars, the Board of Assumed Revenue appointed B.Torin. He was popularly called the 'Collector of Tirunelveli Province and Dependent Poligars'. The Board exercised only supervisory authority over the Collector. B.Torin was given the responsibility of collecting peshkush from the Southern Poligars and income from the revenue units in the *sircar territory*.[164]

Ramanathapuram enjoyed a special status in the last decade of the eighteenth Century, for it served as the headquarters for both the Southern palayams and the British Collectorate. At that time, all the thirtythree southern palayams paid due regard to Ramanathapuram, for the palayams were treated as States and its rulers as Rajahs.[165] The thirty three palayams were ` 1.Ettaiyapuram, 2.Sivagiri, 3.Chokkampatti, 4.Uthumalai,5.Peraiyur, 6.Talaivankottai, 7.Kadambur, 8.Pavali, 9.Kollapatti, 10.Elumalai, 11.Nagapuri, 12.Naduvakurichi, 13.Maniyachi, 14.Sorandai, 15.Sennelgudi, 16.Melmandai, 17.Attankarai, 18.Urkad, 19.Singampatti, 20.Mannarkottai, 21.Sandaiyur, 22.Avudaiyapuram, 23.Seithur, 24.Saptur, 25.Kollamkondan, 26.Panjalamkurichi, 27.Kulattur, 28.Kadalgudi, 29.Ezhaairampannai, 30.Kolvarpatti, 31.Nagalapuram 32.Sivagangai and 33.Ramanathapuram. The first thirtyone palayams were minor Palayams and the last two palayams were major palayams.[166] In toto, they were commonly called southern palayams. The southern palayakkars always chose the region of Ramanathapuram as a place of safety in their encounter with the British. The Madras Government thought of the southern palayakkars as pricking thorns. In order to suppress them, they chose Ramanathapuram and established there a temporary Collectorate.[167] The Collector at Ramanthapuram did not possess any permanent buildings for his official work. He used the place of Ramanathapuram Setupati known as 'Ramalinga Vilas' as his 'Cutcherry' (revenue office).[168]

The short duration of the Third Anglo-Mysore war and its end with the Treaty of Srirangapatnam in March 1792 forced the Madras Government to restore the administration of Tirunelveli province to the Nawab of Arcot. The Nawab also insisted that the Madras government should look after his interests, according to the Carnatic Treaty of 1787. So, the Company surrendered the gains from assumption but under a new settlement. On July 12, 1792 the Madras Government signed yet another treaty known as Carnatic Treaty with the Nawab. The fifth article of the Treaty allowed the Company authority to collect from the

palayakkars' *'peshkush'* to the tune of 2,67,704 star pagodas. But the sixth article allowed the Company to collect the *peshkush* in the name of the Nawab. The eighth article clearly empowered the Company Government to take over the total revenue of the Tirunelveli province, if the Nawab failed to pay his instalments properly.[169]

This Carnatic Treaty of 1792 was a hallmark in the expansion of the British power in the Carnatic. By the fifth article of the Treaty, the Collector at Ramanathapuram gained a recognised position of authority. Besides, this Treaty combined in itself the fundamental principles that were enshrined in the previous Treaties of 1781, 1785 and 1787 and the lessons gained by the British through Assumption, though less to the advantage of the Nawab but more to that of the Company. The Company could get now the revenue of the Tirunelveli Province and debit it to the Nawab's account while the sovereign Nawab was to get nominal authority. In addition, the Nawab lost control over his own jurisdiction and his right to collect peshkush from the Southern palayakkars. This poltiical settlement conferred legal sanction to the encroachments made by the Company without the approval of the Nawab, through 'Assumption' in 1790. Following this treaty, a new commission was assigned to B. Torin immediately. B.Torin who was called 'Collector of Tirunelveli province and Dependent Poligars' under 'assumption was now known as 'Collector of the Southern Poligar *Peshkush'*. It was indeed a legal sanction, as he had been appointed Collector with the knowledge of the Nawab. The Madras Government also fixed the allowances of the Collector. It was fixed to the tune of two hundred and fifty Pagodas per month with an additional one and half per cent upon the net revenue collection.[170]

Torin failed to live up to the expectations, became obvious. Col.Maxwell commenting on his warfare measures against the Southern palayakkars submitted two complaints to the Madras Government. The one was that the Collector was interfering with the powers of the military commandant. The other was, B.Torin's Dubash named Velu had secret league with the southern palayakkars, which the Collector did not take seriously.[171] Receiving this intelligence, the Madras Government immediately ordered Torin to dismiss his Dubash Velu from service. As per the order Velu was dismissed and sent to Madras where he was kept in confinement. This gave a rude shock to Torin who fell ill. He decided to quit Tirunelveli Province. Subsequently, he resigned his post.[172] The Madras Government posted James Landon as the new Collector on November 12, 1792.[173]

Tirunelveli province consisted of many forts which were either under the control of the Nawab or under the Southern palayakkars.There were a

few forts in the Sircar territory at Tirunelveli, Palayamkottai, Kalakkad, Vasudevanallur, Panagudi, Tirukurungudi and Thoothukkudi. The important forts controlled by the Southern Poligars were at Panchalankurichi, Nelkattumseval, Ramanathapuram, Sivagangai, Chokkampatti, Kolvarpatti, and Sivagiri. The Treaty of 1792 made the British to station their army in the Sircar territory. Likewise the British garrisoned all the sircar forts,[174] and gradually attempted to bring the Southern Poligars under the authority of the Collector of Tirunelveli Province. Of all the forts, Palayamkkottai was the strongest and was a stone-built sircar fort. In order to quell the Southern palayakkars, the Collector brought it under the British control.[175] The other Sircar forts except Palayamkottai were garrisoned by the Nawab forces, along with the British troops.

Impact of the Carnatic Treaty of 1792

The Treaty of 1792 practically created administrative problems. The Southern palayakkars according to this treaty were placed under the control of two masters namely the Collector of Tirunelveli Province and the Nawab of Arcot. The Nawab's sovereignty over the Southern palayakkars was still allowed to remain. The Southern palayakkars were asked a small amount of peshkush as the usual mark of dependence that they owed to the Nawab.[176] Their other duties to the Nawab were to attend the durbar for customary ceremonies, to render military service and to perform village watch. But their responsibility to the Collector of Tirunelveli Province at Ramanathapuram required them to pay peshkush. The first category of service entitled the Southern palayakkars to maintain their armed strength and the second category to keep possession of their respective palayams. It made the Southern Poligars to retain their influence without definite restrictions from both the Nawab of Arcot and the Collector of Tirunelveli province.

As the dual authority prevailed over the administration of Tirunelveli Province, the Nawab feared the growth of Collector's power and the Collector feared Nawab's supremacy. It led to grave consequences to both the powers during the period of James Landon who was the Collector. The Southern palayakkars, sixteen of them, gathered in the palayam of Nerkattumseval and started their depredations over the Sircar territory. They exorted money more than the 'mamul'. They seized the stocks of paddy of circar territory and plundered the travellers. The roads were blocked [177] Though the Collector wanted to supress the Southern palayakkars, he was restricted by the instructions of the Madras Government. For a while, the Madras Government instructed the Collector not to meddle with any problem between the Southern palayakkars and the Nawab.[178] Indeed this order emboldened the Southern palayakkars who continued their atrocities under the prevailing anomaly of dual control.

In 1793, Ramanathapuram, the headquarters of Tirunelveli Province witnessed great turmoil on account of conflicts between the palayakkars of Ramanathapuram and Sivagangai. Taking it as an opportunity, almost all the Southern Palayakkars rose in rebellion. They refused to pay kist, using the rebellion as a proper chance. This alarmed the Madras Government. James Landon, the Collector was ordered to stay at Ramanathapuram and ascertain the nature of the demands of the Southern palayakkars. [179] Further, the Collector was required to suggest ways of disarming the palayakkars, whether by peaceful means or by thorough force. [180] The Collector suggested that the palayakkars should be disarmed through military action because the source of trouble lay in their military strength.[181] The Madras Government posted Col.Campbell as the commandant at Palayamkottai to check the Palayakkars. Taking note of the happenings, the Board of Revenue recommended to the Madras Government, to station forces in various parts of Tirunelveli.[182] James Landon as a final measure asked both the Sethupati and the Sivaganga palayakkar to accept peaceful co-existence. [183] At this juncture, the Nawab remained silent to avenge to the Collector's previous silence when the Sircar territory was occupied by the southern palayakkars at Nelkattumsevval.[184]

On June 20, 1794, James Landon passed away. [185] After his natural demise, George Prowney was appointed as the new Collector.[186] He assumed charge from James Landon's Assistant, Balmin on July, 17, 1794.[187] During his Collectorship, Tirunelveli Province experienced acute famine. The Collector directed Setupati Muthu Ramalinga Tevar to allow free import of grain. But the Setupati turned down the request. As a result, the Palayakkar of Ramanathapuram was deposed. He was given an allowance of Rs.1000/- per month for his livelihood. [188] It led to the establishment of direct rule of the Collector over Ramanathapuram, one of the Southern Palayams. [189] But, the authority of the Collector over Ramanathapuram palayam was questioned by the Nawab. The Nawab asserted that he was the sole authority to determine the future of Ramanathapuram palayam. [190] This made the Madras Government to consider seriously the anomaly that prevailed in the existing Treaty of 1792. The British feared that the Nawab would prevent all their efforts to annex the remaining Southern Palayams in the Tirunelveli Province.

Lord Hobart, the Governor of Madras, obviously felt that the nominal right of sovereignty of the Nawab was a source of obstruction to the right of dealing with the Southern Palayakkars.[191] So, he made representations to Mohammed Ali, the Nawab, requesting the latter's consent for a modification of the settlement of 1792. But, the Nawab was adamant and paid no heed to the Governor's appeal. [192] Thereafter, the Madras Government directed the southern palayakkars through the Collector, to disobey instructions of the

Nawab unless they were routed through the Madras Government.[193] The disobedience of the orders of the sovereign was tantamount to rebellion.,

Mohammed Ali, the Nawab, using his tact, intrigue, diplomacy and sagacity took advantage of the hesitation of the British in taking any extreme step against him.He retained his supremacy until his death in October, 1795.[194] Umdat-Ul-Umara, the son and successor, shrewd and clever, was equally determined to maintain his sovereignty over Tirunelveli but he was inexperienced to handle the situation.[195] Lord Hobart the Governor considered this as a golden opportunity. On October 18, 1795, he met Umdat-Ul-Umara and declared that the Treaty of 1792 was a failure and proposed modifications to it. He tried to transfer the whole civil and military administration of Tirunelveli province to the Collector, George Prowney.[196] But, the terms created the impression of rigidity on either side.[197]

The Nawab's native officials like *amuldar, faujdar* and others led the Southern Palayakkars to believe that the Treaty of 1792 was only temporary and induced them to pay no tribute but, defy the Collector's authority. They even created the belief that the Southern palayakkars would be brought back under the Sircars administration.[198] As a result, the southern palayakkars doubted the legal authority of the Collector. To establish his authority the Collector insisted upon the southern palayakkars to pay the fixed peshkush without delay and on the latter's failure, the Collector even threatened them with capital punishment. Thus, the Collector consolidated his authority in Tirunelveli.[199] The Madras Government also laid down new rules and regulations. It imposed new custom duties over the merchandise passing through the southern palayams and tried to abolish the levy of mamul on goods traditionally levied by the southern palayakkars.[200] These aggressive measures brought the palayakkars to the verge of insurrection. Among them who revolted against the British were Varaguna of Sivagiri, Kattabomman of Panchalamkurichi, Setupati of Ramanathapuram and Marudu Pandyan of Sivagangai.[201] They openly defied the authority of the British from 1795 onwards.[202]

On February 28, 1797, George Prowney expressed to the Madras Government his wish to resign the Collectorship. His wish was granted.[203] In his place, W.C. Jackson assumed charge on March 10, 1797.[204] On political considerations Jackson decided to punish the refractory southern palayakkars. He cultivated hostility with Kattabomman, the palayakkar of Panchalamkurichi and took efforts to annex the Palayam. The Collector considered that Kattabomman was the principal cause for the troubles in the Tirunelveli Province. He asked the palayakkar to meet him at Ramanathapuram on various occasions but the palayakkar ignored his call. Therefore, the Collector on July 28, 1798 recommended to the Board

of Revenue the annexation of Panchalamkurichi Palayam.[205] With the consent of the Board of Revenue, W.C. Jackson, the Collector ordered Kattabomman to appear before the Ramanathapuram *Cutcherry* (revenue office) without fail on or before September 9, 1798.[206] The Collector also planned to arrest Kattabomman at *Ramalinga Vilas'*. Kattabomman suspected some foul play and tried to escape after killing Lt.Clarke, on September 10, 1798.[207]

The Madras Government ordered an enquiry by constituting a committy with Lt.Col.William Brown, Lt.Col.William Oram and John Casamajor as members.[208] The committee charged Collector Jackson with grave misdoings and impeached him on two grounds. First, the Collector Jackson's conduct to the palayakkars was unnecessarily harsh and severe.[209] Secondly, it confirmed that Jackson's administration was not without corruption.[210] On these grounds, Jackson was dismissed from service. He was convicted but not arrested.[211] The British expected this fair judgement would reduce the anti-British activities of the southern palayakkars. But in reality the judgement emboldened the palayakkars to be more belligerent.[212]

The action contemplated against Kattabomman by the British resulted in the formation of the Southern palayakkars League. Kattabomman as usual disregarded the authority of the new Collector S.R.Lushington who assumed charge on January 12, 1799.[213] As a leader, Kattabomman posed a threat to the British interest in the Tirunelveli Province and thereby necessitated the military expedition of Major Bannerman who at first warned the southern palayakkars particularly of Nagalapuram, Kolvarpatti, Kadalgudi, Kulattur and Ezhayirampannai, against their league with Kattabomman. Then, Bannerman marched towards Panchalamkurichi to arrest Kattabomman. On October 16,1799 Kattabomman was arrested and hanged on a tamarind tree at Kayatar on the Tirunelveli - Madurai road.[214] Bannerman wanted the six principal southern palayakkars to be obedient to the Collector Lushington. Later on, the six rebellious palayams were requested by the Collector.

After the departure of Major Bannerman, the rebellion of the southern palayakkars were spearheaded by Umaithurai, the brother of Kattabomman and Marudhu brothers of Sivagangai. To suppress the new rising, Lt.Col.Agnew was sent.[215] After some prolonged struggle with the British military force, Umaithurai went to the headquarters of southern palayakkars, Ramanathapuram, on May 28, 1801.[216] The dissatisfaction against the British had spread out like wildfire throughout Ramanathapuram .[217] In order to suppress the southern palayakkars Rebellion, the whole British Carnatic force marched towards Ramanathapuram on October 1, 1801. The palayakkars abandoned Kalayarkoil the hub of their activities. and fled away. On October 4, 1801 the Marudu brothers were caught with

200 men in Singampunari jungles.[218] On October 24, 1801, Marudhu brothers and a hoard of other insurgents were executed on the ruins of the fort at Tiruppattur.[219]Prior to this, Umaithurai and Sevatiah, the brothers of Kattabomman were taken to *Panjalamkurichi* with their followers. There Umaithurai was executed on the northern side of the dismantled fort and Sevatiah on the southern side.[220] With the suppression of these principal southern palayakkars, all the others became nervous and decided not to defy the British any longer. Thus, the palayakkars rebellion was completely put down. After this victory, the British proceeded with the reorganisation of administration in Tirunelveli.

The British were determined to wrest the Tirunelveli province from the Nawab's control. Therefore, Lord Edward Clive, the Madras Governor, made repeated appeals to the Nawab to hand over the province . However, his negotiations with the Nawab Umdat-Ul-Umara failed for a while . It was because of the death of Nawab on July 15, 1801. Thereupon, Lord Edward Clive deputed Josiah Webbe and Lt.Col.Close for a meeting with the important officers of the late Nawab Umdat-Ul-Umara regarding succession.[221] Negotiations were held between Lord Edward Clive and Azim-Ud-Daula, the son of Amir-Ul-Umara, the second son of late Nawab Mohammed Ali.[222] Azim-Ud-Daula accepted a new political settlement in return for his ascendancy as the Nawab of Arcot. On July 31, 1801 he ascended the throne by entering into an agreement with the British Government, known as the 'Carnatic Treaty of 1801'.[223] It widened the responsibility of the Collector at Ramanathapuram. The interference of the Nawab in the Collector's affairs was completely to be stopped. Further, the post of Nawab's amuldar in the Tirunelveli Province was abolished.

Formation of Tirunelveli Collectorate

On the same day of the Carnatic Treaty of 1801, the Madras Government appointed S.R.Lushington as the Collector of Tirunelveli.[224] He was directed to superintend temporarily the southern palayakkars region from Tirunelveli until the appointment of a separate new Collector for that region.[225] On getting the order, Lushington moved from Ramanathapuram, the headquarters of the southern palayakkars, to Tirunelveli. It led to the birth of the Tirunelveli Collectorate. The history of the Tirunelveli Collectorate begins thenceforth. Lushington assumed charge of the Tirunelveli Collectorate on August 8, 1801.[226] In 1802, he left affairs the and administration of the Collectorate of southern palayakkars to the Head Assistant, George Parish, who served as Acting Collector. Lushington had only superintendence over the Collectorate at Ramanathapuram.[227]

Now the British felt that their ascendancy through the grasp of administration would further their prosperity. They were desirous of obtaining political ascendancy through a new revenue settlement. At this

juncture, the Court of Directors recommended to the Madras Government to introduce Permanent Revenue Settlement in the southern palayakkars region. Lord Edward Clive, the Madras Governor, immediately directed the Board of Revenue to study the previous revenue assessment.[228] As a consequence , the Permanent Revenue Settlement was introduced in the southern palayakkar region in different stages from 1803. [229] By this system, the Southern palayakkars were declared proprietors of the lands within their palayams so long as they paid the rent fixed on their lands by the Collector at Ramanathapuram.[230] The Special Commission appointed by the Board of southern palayams fixed the Permanent Revenue Settlement of the 27 palayams. On acceptance of the assessment, the southern palayakkars were given *sanad-i-milkiyar-i-istimrar* or Deed of Permanent Settlement and they became Zamindars. [231]

Administrative Rearrangement

The implementation of Permanent Settlement in southern Palayams brought about a new course of administrative changes gradually. A Zillah Court was established in Ramanathapuram. It had jurisdiction over the permanently settledJaheer and smaller Palayams of Southern Palayakkars region.[233] After the settlement was over, S.R.Lushington was appointed the Registrar of the court of *Sadr Adalut* in the place of Falconar who was appointed to the Board of Revenue. It led to Thackeray's appointment as the Collector of Southern Palayakkars region. The Madras council directed Thackeray to settle the *jumma* of Ramanathapuram and Sivagangai on a permanent basis and to receive the charge of Tirunelveli from S.R.Lushington.[234] Meanwhile, a Zillah court at Masulipatnam, was established. It led to Thackeray's appointment in the judicial line at Masulipatnam Therefore, James Cochrane who served in the ceded districts was appointed the Collector of southern palayakkar region. [235]

The year 1803 witnessed a new dimension in the history of the Collectorate of southern palayakkar region on the one side and on the other it marked the fulfilment of expansion of the British paramountcy.in the southern part of the Carnatic. In that year, James Cochrane who had so far looked after the affairs of the Collectorate of Southern Palayakkar region handed over his charge to Edward Clive, the Governor of Madras on the latter's wish. Clive in 1803 proposed a new administrative system. He introduced bifurcation of the Collectorate of southern palayakkars region. As a consequence, two new Zillahs came to be established in the Madras Presidency out of the Collectorate of southern palayakkar region. By the new administrative arrangement, George Parish was appointed the 'Collector of Ramanathapuram Zillah'. The district of Tirunelveli became a separate Collectorate under the superintendence of James Cocharane. He took charge of the Collectorate of Tirunelveli alone or November 5, 1803. The Collectorate of Ramanathapuram had its jurisdiction over

Ramanathapuram, Sivagangai, the settled Palayams or Zamins of Tirunelveli, Dindigul, Madurai and Marungapuri.[236] T.B.Hurdis, the Collector of Madurai at Dindigul handed over the Zamins of Madurai and Dindigul to George Parish. Thus the Zillah of Ramanathapuram or the Collectorate of Ramanathapuram became a historical necessity and occupied a special place of honour. It was clear that it came into existence in the place of the rebellious palayams in the southern poligar region.

In the meantime, the service of James Cochrane was required by Major Munro, the principal Collector of the Ceded districts for some time. Therefore, George Parish temporarily superintended the Collectorate of Tirunelveli district. He submitted a Report in1802 on the revenue settlement of Tirunelveli district.[237] There was decrease in the revenue of the Tirunelveli for 1802 as a result of unfavourable season, to the extent of 524032922 star pagodas. George Parish's 1802 settlement was to the tune of 458624751 star pagodas. He submitted the whole of jumma for the two Collectorates of Tirunelveli and Ramanathapuram to the tune of 803898 star pagodas. On his settlements of both the Collectorates, the Collectors noticed the peaceful and contended conduct of the zamindars. The Board of Revenue was satisfied that it felt the real cause of the decrease in revenue was due to the failure of the monsoon. At the same time, the Madras Government issued two directions to George Parish to improve the agrarian situation of Tirunelveli. Parish was recommended to reduce the expenses on cinamon plantation in the district of Tirunelveli. He immediately acted. He transferred 2000 cinamon plantations to the charge of the Board of Trade as soon as it was formed at Madras. Further , on the direction of the Madras Government, Parish offered grain and money to the inhabitants on account of their loss at the time of the rebellion and due to the prevalence of the unfavourable season.[238] Thereupon, for the year 1803. James Cochrane completed the revenue settlement of Tirunelveli district. It was an improvement on the previous settlement of 1802. In that settlement, Cochrane had referred to the system of Land Tenure in Tirunelveli district which was anomolous. The Collector complained that because of this Land Tenure, he could not liberate the ryots from the oppression of dominant *mirajidars* who indulged in secret intrigues and dodged payment. The Madras Government ordered the Collector to punish the defaulters.[239] The revenue survey of the district of Tirunelveli had been commenced by the Collector S.R. Lushington. Now, his successor George Parish prosecuted the defaulters and completed the survey and classification of land. The assessment of each class of land was left to James Cochrane who settled the problem and determined the actual produce of the soil in his settlement of 1803.[240]

The palayakkars who became the zamindars in Tirunelveli and Ramanathapuram maintained as large a military force as they thought

proper. The class of military men which appeared one day at the plough and another day in arms at the call of the Zamindars could not pay attention to lands.[241] The government took no precautionary measures to enforce the patta regulations and for protecting the rights of the ryots against the capacity of the renters. The avarice of the renters in collecting rents from the ryots ruined the permanent resources of the district. Besides, this practice depleted the ryots of their small capital and made them miserable.[242] The Zamindars in Tirunelveli region paid more attention to military matters than to cultivation. Under the circumstances, the ryots hardly showed any interest in cultivation.[243] Fertility of the soil way not taken in to consideration while making assessment which caused for the failure of the permanent revenue settlement.[244]

Village Lease System

About this time Hodgson, a member of the Board of Revenue toured the district and submitted two reports to the Government, dated 10 and 24 September 1807[245]. His reports proved that vast tracts were included in the Zamindaries which existed merely as waste lands. Hence, no income went into the hands of the Government since they were not converted into cultivable lands [246] The ryots largely depended upon rainfall for their cultivation. This led them to fall into arrears of payment.[247] The visitations of famines in quick succession in the wake of bad seasons drove them to the verge of beggary. [248] Besides, the ryots could not protect themselves from the exacting dues of the landlords,[249] a common phenomenon in the Zamindaries of Tirunelveli and Ramanthapuram.[250]

The symptoms of the failure of Permanent Settlement was visible as early as 1807 in Tirunelveli district. The Board of Revenue contemplated another settlement to curtail the existing defects in the revenue system. William Bentinck and Thackaray had already objected to the operation of Permanent Revenue Settlement. William Bentinck (1803-1806) had expressed his view that this settlement would not work in Tamil districts.[251] Thackeray gave two reasons for his objections. It did not in any way directly better the position of the ryots or the actual cultivators and second politically it was an unwise thing to create landed aristocracy.[252] A ryot could be converted into a Zamindar at any time but a Zamindar could never become a ryot if found unsuccessful. In his minutes dated 28 February 1807, Thackeray recorded, "*The more I consider this important question, the stronger is my conviction that the present system is not the best that might be adopted*.[253] Thackeray, junior member of the Board of Revenue (1803-1806) in his memoir supported the view of Bentinck. The Court of Directors also began to reconsider the issue in the light of criticism of the servants in the Company.[254] At this juncture Hodgson, who had been directed to enquire into the causes of failure of the Permanent Settlement, submitted his report on July 21,1808. He suggested the

introduction of *village settlement*, a system which was identical to that of the Permanent Settlement.[255] His report urged the necessity for the adoption of Village Settlement, pointing a greater number of villages in the district. The whole district was now divided into villages with generally fixed boundaries including tracts of land both arable and waste. The Sircar's share of land revenue was usually received from the *nanja* or wet lands at the rate of sixty percent of the gross produce after deducting a certain portion distributed before the threshing season.[256] The share of the Sircar from *punja* or dry grain land was usually received in cash either at one rate for a fixed measure of land or at another rate for the same measure of land depending on the produce.[257] Hodsgon favoured a settlement with all the mirasdars of a village on the basis of the extent of area under cultivation and the rates of taxes in the preceding years. The mirasdars were to be encouraged at every instance to collect rents from villages and it was only when they refused, the villages were to be formed into *Mittas* and sold to the highest bidders. The lease was to be limited for a period of three years.[258] The government of William Bentinck approved it without any objection as it was felt better calculated for an ultimate measure of permanency than the other system.

The government felt that the introduction of the Village Lease System would be less oppressive and more profitable to the ryots. [259] Considering its familiarity with the people, it was thought that the interests of the ryots would be better served under this system. In view of these facts, the Triennial Village Lease System was introduced alternatively to the Permanent Settlement during 1808-1809 in Madurai district and in the district of Tirunelveli between 1808 and 1814. [260]

By this Village Lease System, the company entrusted the lands of a village to the principal cultivators of the village. The chief cultivator was generally the mirasdar or an influential inhabitant. [261] The chief cultivators further divided the land and leased it to individual ryots. This kind of arrangement continued for a period of ten years. As the period was fixed, a standard rent called 'kist' was devised on the basis of the permanent resources of the villages. Lands were categorised as wet and dry. From the wet lands, forty to sixty per cent of the gross produce after deducting certain portion for meeting the expenses for threshing was collected. From the dry lands, tax was collected in the form of cash but, it varied from place to place. Temporary settlements were made in the under-developed villages where the cultivation was very poor. The renters, or the chief cultivators, were not disturbed so long as they paid the 'kist' regularly. Generally, the rate of 'kist' was fixed as half of the produce. But, on the improvement of lands one third of the gross produce was expected.[262] George Barlow, the Governor and his council expected that this system would avoid the trouble of frequent settlements and bring about a permanent solution.[263]

But the Court of Directors found no difference between the Permanent Settlement and the Village Lease Settlement.[264] The Madras Council wrote two letters in justification of the Permanent Village Settlement in the permanently settled district of Tirunelveli.[265] On this ground, the Court of Directors directed the reluctant Madras Governmnent to implement the Ryotwari Settlement in all the non-permanently settled villages while keeping Village Settlement alone in Tirunelveli.[266]

After the introduction of the Village Lease Settlement in Tirunelveli, the Madras Government undertook one more important measure in 1808. The Collectorate of Ramanathapuram was abolished in order to reduce administrative expenses.[267] As a result, among the twenty-five Zamindaries under the Collectorate of Ramanathapuram, ten were transferred to and linked with the Collectorate of Madurai. They were Sennelgudi, Mannarkottai, Kollapatti, Sattur, Pavali, Kollankondan, Peraiyur, Elumalai, Sattur and Sandiyur. The remaining fifteen were retained with the Collectorate of Tirunelveli. They were Ettaiyapuram, Melmandai, Attankarai, Kadambur, Maniyatchi, Sivagiri, Talaivankottai, Avudaiapuram, Naduvakurichi, Alagapuri, Uttumalai, Surandai, Chokkampatti, Urkad and Singampatti.[268]

The Palayams under the British

After 1801, the palayakkars were in no mood to rebel. They became the zamindars, the renters of the land subject to the payment of a fixed revenue to the British coffer. They levied taxes as per their own wishes. The ryots in the zamin had to pay taxes willy-nilly, to both the British and the zamin, indirectly and directly. The zamindars were more or less chieftains. They had infantry, cavalry and other retinue and paraphernalia. The people looked the zamin as the kings and paid respects and homages. Many of them looked after the subjects with affection. The profiles of important palayams turned zamins are given here . The zamindars became ordinary citizens after the abolition of zamindari system in the post Independence period. Still many of the successors of the zamindars are referred to as Rajahs and they livein palatial bungalows and enjoy respects from the local people.

Singampatti

In 1803, the Singampatti palayam became a zamin. Singampatti is in Ambasamudram taluk on the banks of the river Manimuthar. There were many litigations for the ownership of the zamin. Nallukutti Thevar, Periyasamy Thevar, Sankaravadivammal, Periyasamy Thevar, Sudalaimuthu

Ammal, Sivasubramaniya Thevar and Thennattuppuli Nallukutti Thevar were some of the zamindars. The successors of the zamindars still live in Singampatti.

Nelkattumsevval

Nelkattumsevval or Avudaiyapuram, situated in Sankarankoil taluk is to be written with read letters in the history of the Freedom Movement of India for it was the headquarters of Pulithevar, the first chieftain in Tamil Nadu to resist the British. The author of the Tirunelveli District Gazetteer, H.R. Pate, observes as follows:

> *Nelkatrtanseval is chiefly memorable as having been in the eighteenth Century stronghold of the redoubtable Pulithevar, who figured for many years as the leader of the Marava Confederacy against the troops of the Nawab and the Company. To the courage of the Marava warrior, he added the williness of the Mahratta. He had a shrewd insight into the political situation of the time and was a veritable thorn in the side of the Nawab's agents.*

The palayam which was granted on a deed of permanent settlement in 1803 to the palayakkars of that time, had since then passed through many vicissitude of sub-divisions and sale and no part of the ancient zamindari had descended by inheritance to heirs of the Sanad-holder. The name officially adopted was Avudaiyapuram, perhaps the British did not want to utter Nelkattumsevval, which would remind them of Pulithevar.

Sivagiri

`Sivagiri Palayam was both pro and anti-British according to the circumstances. The son of Sivagiri Palayakkar Varaguna and an able warrior Mappillai Vannian of Sivagiri assisted Veera Pandyakattabomman against Bannerman, who headed the military operations against Panchalamkurichi. The zamindar belonged to the Maravar community. They traced their origin to the Royal family of the Pandyas of Madurai., The headquarters of this palayam was first in Sundankulam from where it was shifted to Thenmalai. Later, Sivagiri became the headquarters. The natural strength of the Sivagiri fort was tested on atleast three occasions by the British army. In 1767, the place was attacked by Col. Campbell. In 1783, Col. Fullarton, after a desperate encounter, defeated the palayakkars' united forces of 8000 men and received their submission and again in 1792,the place was attacked and captured by Col.Maxwell. On all these occasions, the defenders fell back on the fortified ravine or

A view of Pulithevan Palace, Nerkattum Sevval

kombai, in the forests immediately to the west, from which it was only by outflanking manoeuvres that they could possibly be dislodged. Col. Fullarton has described his assault on the place."as desperate as any contest in that species of Indian warfare" [269] Sivagiripalayam was next only to Nelkattumsevval in undisputed leadership among palayakkars until the rise of Panchalamkurichi into prominance. When Fullarton invaded the palayam, the actual palayakkar was a female but she was ably assisted by her husband Sendalli Kalai Pandyan. When the attentioln of the East India Company turned towards Panchalamkurichi, the palayakkars became a supporter of the Company though his son and his advisers Mappillai Vannian and Sankaralingam Pillai joined hands with Veerapandya Kattabomman in opposing the Company's forces. However, the son kept himself aloof from the confederacy of the palayakkars formed to rebel against the British and as a result he was given the Palayam under zamin settlement in 1803 by the Company. In 1819 Veerammal Nachiyar became the zamindar. In the view of the then district Collector, she had *rare instance of education among the native women of India.*[270] The management of the zamin was left to her husband whose inclination was in favour of sports and not in the administration of the estate. It was during his time that this zamindari lapsed into a condition of indebtedness. Hence, the zamin was attached to the Collector in 1827. In 1835 when a part of the arrear was paid, the estate was restored and the remaining arrear was written off. The successors of the zamindarini was not an able man. Hence the zamin was once again attached to the Collector. In 1870, the Creditors of the Zamin obtained a court decree for the sale of the property. In the desperate conditon, the zamindar and his son requested the then Collector Puckle to take possession of the estate and save it. After consulting the civil court, which ascented, Puckle took the zamindari under his management and set to work to put its finances straight, though the Board of Revenue pointed out that he should not have taken over the management of the estate without the sanction of the government. In 1872 the civil court attached the estate and the Deputy Tahsildar who was the manager of the zamin appointed by the Government became receiver under the court. On the death of the zamindar in 1873, his son succeeded. He repudiated the debts and the receivership was terminated. He took over the management which lasted for twenty years. In 1896, his son, Ramalinga Varaguna Rama Pandya Chinnatambiyar, a boy of seven , succeeded him. The estate was taken under the court of wards which continued to administer till 1910. When the administration was under the court, Rama Rao was appointed as manager. He improved the zamin and saved a large amount in the account of the zamin after paying the Revenue taxes. He opened a veterinary hospital in the zamin in 1910. A demonstration farm started by the previous zamindar was developed by the manager and the farm with its extent of 250 acres was one of the most successful and

noteworthy institutions of its kind in the Presidency.[271] The court educated the minor zamindar in Madras (Chennai) and after attaining majority he took charge as the zamindar in 1910. He died in 1914 having spent all the savings which the court of wards had accumulated for him and having incurred in addition a personal debt to the extent of three lakhs of rupees. His mother succeeded but on the application of a rival claimant, a receiver in the person of the zamindarini herself, was appointed in 1915.

Chokkampatti

Chokkampatti in Tenkasi taluk was an important zamin of the Kondaiyankottai Maravars. The headquarters of the palayam was in Vadagarai and probably by 1767 it had been to Chokkampatti. In alliance with Pulithevar and the Sivagiri palayakkars the Chokkampatti palayakkars also gave tough opposition to the British and the Nawab troops. Chinnananja Tevan, the Palayakkars took leading part in the great confederacy which united its forces with a firm determination of overthrowing Yusuf Khan, the Company's representative. Considering him to be the most dangerous of all the allies, Yusuf Khan directed his first move against Chokkampatti in the year 1758. The palayakkar's village was besieged and his fort was in danger. Vellaiya Tevan another claimant of the palayam defeated Chinnananja Tevan and henceforth the relationship between the Chokkampatti palayam and the British had become very cordial. Col.Fullarton once helped the palayakkar to save his fort from extermination at the hands of the enemy palayakkars. However, the friendly relationship did not last long. On the surrender of the Assignment in 1785, Vellaiya Tevan's position became hopeless. His enemies among the palayakkars informed Etibar Khan, the Nawab's Commander that Vellaiya Tevan was a potential danger. The troops of the Nawab marched on to Chokkampatti in 1787 and Vellaiya Tevan took to his heels. Chinnananja Tevan was at once restored. He died in 1790, and his minor son became the palayakkar. Meanwhile, Vellaya Tevan continued his friendly relations with the Company and especially earned the gratitude of Col.Maxwell during his expedition and attempted a settlement in 1792. His claims to the Palayam were brought by the Collector Prowney in 1795 to the notice of the Government who decided that the restoration of Vellaiya Tevan was, "No less an act of justice than of policy". Accordingly, he was re-instated. Chinnananja's son was given a subsistence allowance which continued to be paid till his death in 1825. In 1803, Vellaiya Tevan became the zamindar. After his death in 1810, his son Valangapuli Tevan succeeded him.[272] Pursuing an anti-British policy, he refused to pay taxes to the Government. He was charged with involvement in the plundering of Tenkasi Treasury in 1814. He and his companion became a threat to the company administration. Even the police and the subordinate magistrates were afraid to deal with them. The courts were filled with the zamindar's informers who watched

and reported all proceedings and no witness dared to give evidence against them. He set up civil and criminal courts in which cases were tried and punishments awarded. In 1822, he was sued by the Company government for setting up of courts of his own. The judge of Madurai Court recommended to Government under the provisions of the Madras Regulations II of 1819 (State Prisoners) that the zamindar should be deported. The Government, however, was reluctant to carry out the recommendations. It issued an order to the zamindar as follows: "They (the Government) impute the irregularities of the Chokkampatti palayakkars to his imperfect acquaintance with the Regulations and express the hope that he will, of his own accord, make reparation of any injury which individuals may have suffered" This order forced Valanguli Tevan to go underground. His anti-British activities continued. He did not pay any tax due to the Company from his zamin. The Government decided to sell the Zamin by auction. Valangapuli Tevan was arrested under Regulation II of 1822 (Criminal Procedure) in view of danger to life and property involved in leaving him at large. In the auction, the Government itself bought the zamin in 1834, for Rs.8000.[273] It is found that the arrears of tax to the Company from his zamin was Rs.74000/- in 1834 though the entire zamin was auctioned off for Rs.8000/-. The zamindar coerced to execute a deed transferring the estate to his son. The Collector strongly advised that the Government should relinquish in his favour the property which they had bought. The Government, however, declined to restore the estate and directed that it should be duly surveyed and assessed. The supporters of the ex-zamindar agitated for securing his release. They filed a petition in this regard in 1835 in the circuit court. The application was dismissd by the judge on the ground that he could not intervene in the case of a state prisoner deported under Regulations -II of 1819. "Why then" the zamindar exclaimed, "if I am a State Prisoner do not Government conform, to their own laws by sending the warrant prescribed by Regulation - II of 1899" His "acquaintance with the Regulations" was so thorough. Realising his mistake the judge addressed the Government with a recommendaion that action under Regulation II of 1819 should be taken. The proposal was accepted. A warrant was issued and in 1835 Valangapuli Tevan was put in the Gooty (Bellary) prison as the State prisoner. Valangapuli Tevan appealed to Supreme Court where he could not succeed. Then he appealed to the Government of India which characterised the previous proceedings as irregular and ordered the Madras Presidency to release him on security in 1837. However, he was not allowed to enter Tirunelveli district. His son took every effort to get back the zamindari from the Government. Atlast he laid his case before the court of Directors and the court of Directors referred this case to the Madras Government. Still the Madras Government, did not want to restore the zamindari. Atlast the Court overruled the Madras Government and directed that the estate should be

handed over to zamindar's son, Karunalaya Valangapuli Tevan. On 16 August 1859, the new zamindar was put in possession. But the zamin came under heavy debt owing to the court expenses. Hence a portion of the zamindary village was sold in auction. Collector Puckle had had described Chokkampatti thus: "Chokkampatti is a miserable collection of huts, filthy to a degree and there the zamindar has lived, surrounded by pigs and buffaloes while his estate was going to ruin and his ryots becoming more impoverished yearly". In 1869, the remaining portion of the zamin also was sold under auction and thus came to an end of a zamin which gave certain kind of opposition to the British paramountcy in the district. The zamin became a small *mitta* and assigned to those who paid fixed taxes Karunalaya Valangapuli Tevan spent his last years in Courtallam and died in 1892.

Uthumalai, Surandai, Talaivankottai and Urkad were the minor Zamindaris in the district. Studies in the records show that zamins and litigations were inseparable. Most of the zamindars could succeed only after litigation. The zamins often fell in arrears of payment to the Collectors and consequently, they would be either attached or auctioned and on the clearance of arrears, they would be restored. The family members of the zamindars seemed to be well-educated and had lived a life of ease and comfort .

Tirunelveli District between 1800 and 1947

The district was under the administration of nearly 200 collectors since 1790. The primary duty of the Collector was to collect the land revenue and deposit it with the Government treasury. For the collection of taxes without any difficulty, he had a police force at his command. The mainstay of today's district administration is the Revenue Department and the Collector. That is why today the Revenue Department of the Government is in charge of the general administration of the district, though many of the duties and responsibilities vested with the Collector until the first half of this Century have been divided among the various departments like Police, Judicial, Treasury, Registration, Civil Supplies, Public Works, and Rural Development. The collectors launched certain irrigation works to facilitate more yield and so that more taxes could be levied.

Forests

The British administration restricted the people's access to forest resources. For many years, the people were using forest resources. In the ancient and medieval times clearing the forest and bringing it under plough was considered a virtue. After the British took over, they declared certain areas as reserve forest and prevented people from

encroaching into such areas. In 1842, H.Montgomery, the Collector notified a list of 'valuable' trees and prohibited their removal except on the receipt of permission from the Tahsildars and on payment of value at fixed rate.

The concept of preservation of wildlife was not thought out yet. There was a separate establishment for shooting elephants in the district and during 1825, the sum of rupees spent for shooting elephants in the Nadumangalam Taluk of the district was Rs.905/-. Though started as a revenue boosting measures, the Forest Regulations slowly got converted into Forest Conservancy Policy.

Separate Department was created exclusively to look after the forests of Tirunelveli and Madurai districts in 1866. Later in 1882, the Madras Forest Act and later the allied Acts such as Wild Life Act and Acts regulating hunting in the forests were passed.[274]

Communication

Rani Mangammal, the Nayak Queen was the pioneer in road building. There are still certain roads referred to as 'Mangammal Salai'. The East India Company administration spent little on the road maintenance and bridge building. There was no improvement in the condition of the roads till the 19 Century. By 1818, there remained three principal roads crossing the district.[275] The total length of the roads was 310 miles. They were the Tiruchirappalli-Kollam road (130 miles), Sea Coast to Tenkasi road (42 miles) Travancore to the border of the district through Ariyankavu Pass (90 miles). There were no bridges across the river Tamiraparani. The East India Company administration and private people plied boats across the river. There were boats designed to carry carts in it. Bridges were began to be built in the district since 1891. By raising local subscriptions many bridges were built later on. The bridge connecting the twin towns Palayamkottai and Tirunelveli, was built in 1843 across the river Tamiraparani, by Sulochana-Mudaliar, a dubash for the Company government and the bridge was named after him. After the formation of Local Boards, only public works began to be carried out out of the local funds. The railway traffic was inaugurated in 1876.[276]

Public Health and Education

The District and Taluk Boards constituted as per the Local Boards Act, 1882, played a vital role in improving public health. The Government did not defray any amount directly for the maintenance of hospitals. Similarly, the British ruler allotted only grants for the maintenance and improvement of education. Church Missionaries and local bodies such as

Municipalities, District and Taluk Boards maintained schools up to secondary level. Higher educational institutions were maintained by the Church Missionaries and Private Endowments. The Government administered education by setting up an administrative and inspecting agency called the Department of Public Instruction.[277]

Land Administration

In the land administration the British Government brought about a breakthrough. Hitherto the concept was that the land was considered to be belonged to the State and all the cultivators were in principle tenants. Local Chieftains, palayakkars, zamindars, Mittadhars and Nattanmaikkarars' held lands in their territories and in many cases the ryots were leading a life of serfdom. Though the zamindari system, the rehash of the Palayam system, continued as it was upto Independence, pattas were begun to be issued to the ryots as early as in 1806. Inspite of the protests from the leading men of the villages, 'pattas' (title deeds) were distributed to the ryots in nine out of the nineteen taluks of the CompositeTirunelveli district in 1866.[278] Further progress in this regard was not recorded but, the settlement of the dry lands of the whole district was in accordance with the ryotwari principles. Village Karnams (accountant) and Village Munsiff (Headman) were appointed to keep the village accounts of the land revenue and maintain law and order. Land was surveyed and assessed for taxation by the Department of Survey and Settlement.

One of the most important economic results of the Revenue system by the British was the blow it gave to the old obstructive claim of Mirasi right. Hence in 1826, orders were passed requiring the issue of pattas, the question arose who should receive them. Should they go to the mirasdars or to the cultivating ryots? It was reported that in the entire district, there were only 36 villages in which mirasi was unknown and that since the early years of the Century, the claim had become by degrees more widespread. The classes of villages were distinguished at the time as *panguvali* village, *pattavritti* village and *parampattu* village. In *Panguvalai* village, the Mirasdars were the virtual owners of all land, in *pattavritti* village the mirasdars enjoyed a fixed portion. In Parampattu village the mirasdars were the cultivators. But, the Board of Revenue gradually abolished the mirasi right and pattas were issued to those who cultivated the lands.[279]

Survey and Settlement

In 1861, the Government decided that the district should be surveyed with a view to its settlement on the ryotwari principles. Demarcation began in 1862. In survey and settlement of the district the role of R.K.

Puckle, the Collector of the district, later Director of Settlement and the general supvervisor of the settlement work of Tirunelveli district was memorable. The settlement, Puckle's Settlement as it was rightly called, is most important epoch in the modern history of Tirunelveli.[280] The ryotwari system was designed by Munro, the Governor of Madras Presidency. The system is defined as that the State itself as supreme land lord and individual peasants as land owners who obtained title by paying annual cash rent or revenue assessments to the Government. The term ryot, designated all peasants to Thomas Munro, but no District Collector could work effectively without recognizing important distinctions among peasantry, such as those that distinguished family farmers in the wet and dry zones of Tirunelveli district or those that separated greater and lesser families in every village community. In the village itself, to be a peasant meant much more than to pay rent to the State, it entailed caste identity and customary relation of inequality that put each farmer in his place in local society but had no place in ryotwari theory. Likewise, Zamindars remained little kings for their subjects and they retained the title Raja and held customary authority in ritual and caste structures that defined their territorial dominions.[281]

The Officers needed detailed information and uniform records by which to manage land taxes and disputes over land rights. Steps in that direction began in earnest in Tirunelveli district in 1862 with the beginning of survey and settlement. Sixteen years to complete, it cost the government more than 75 lakh of rupees, nearly 75 per cent of the district's annual revenue at its completion in 1878. Survey and settlement involved five steps, each in its own way a major fact, boundary demarcation, survey of soil classification assessment and recording of rights.[282] Together these provided the technical basis for a new state of action in pesant communities. Survey and settlement procedures - nonetheless altered forever the style of pesant interaction with the State, for they succeeded in their most important goal, to channel copious information and their power to define the term of revenue transactions, into urban official hands. Officers in district headquarters would never again contemplate bizarre local weights and measures, never again travel to villages in order to find out who owned what land and who paid what tax. At their desks bureaucrats could study books of uniform records, which enabled qualified men to perform revenue and other duties of state anywhere in the Presidency. After mid-Century, we see the evolution of an agrarian society -animated by increasing mobility. In 1876, the number of people departing railway station totalled more than one fifth of the entire district population and 25000 workers left by sea for plantations in Srilanka while 24000 tons of freight left the district railway stations.

The offshoots of the Survey and settlement in the district enabled the farmers in great numbers to use the offices of Registration Department especially to record mortgages. Registering records, settlement of records and pattas, now became absolutely authoritative symbols of ownership. They defined for all to see precisely who owned what land who held what land on mortgage. Prior to survey and settlement, all documentary evidence concerning ownership and tenancy had been suspect which slowed Court proceedings, increased Court costs, and undermined judicial decrees. After the survey and settlement any dispute could be officially put to rest by bureaucrats or judges by reference to documents on his desk. No knowledge of local custom or perusal of contradictory evidence would be required and none would confuse the issue under official consideration. A technical means to lower costs and quicken state operations, survey and settlement enabled more people to use district offices, enabled officers to make more decisive moves into local affairs and thus altered the course of conflicts and conflict resolution in towns and country by bringing more information into Government offices. Likewise survey and settlement in the district deprived the village officers of some of the levers they had held formerly to manipulate village affairs. As the bureaucracy widened and tightened its grips on agricultural resources, the village officers became "the key store of the arch" of the Madras administration. Like zamindars, village headmen were no longer the little kings they might once have been, but they remained resourceful peasant leaders endowed with symbols of authority, superior economic assets and powerful local allies.

Impact of the British rule in social life

Many of the mirasdars, resident at distance from the villages in which they held offices, moved into the widening world of opportunity created by the growth of government and urban employment. Venkata Rao, a land owner himself in a village near district headquarters, who became *naib* Sharistada, (head clerk) and later as Deputy Collector managed Ettaiyapuram zamindari for the Court of Wards. Many such persons from the mirasdars background looked to that widening world with high hopes. They went schools, wrote examination, obtained employment with the government that opened upto them. They became teachers, professionals, traders and built futures in the city based on inherited assets in wet villages. Brahmins like Venkata Rao achieved success out of all proportions to their numbers and their landed wealth. Yet to judge by mid-nineteenth Century evidence on the caste composition of the office corps, 'high caste' non-Brahmins especially Vellalars with roots on the banks of the Tamiraparani entered competition for elite jobs in hot pursuit.[283]

It could not be said that the subjects could not raise their fingers against the administration. Maravars, particularly, attained renown as

underworld agitators. Marava zamindars, especially Sivagiri and Chokkampatti became dreaded personalities to the district administration. They broke laws of civil society, fell into arrears, resisted efforts by the Court of Wards to manage their estates and fought the Government every step of the way over control on hillside forests. Marava Kaval Chiefs and village watchmen provided essential police service. Crime and Criminal investigation remained very much a local affair in their hands. Even one district judge joined the general population by paying for private Marava Protection service. A series of investigations undertaken revealed that any attempt to take control of rural police work away from local Marava leaders would prove too much expensive and potentially disruptive.[284]

Towns began to develop from 1800 to 1881. These towns housed the region's major government offices, bankers, businessmen,temples and deities and educational institution. The government offices located in the towns of the district were taluk office, sub-registrar office, police station and taluk and union board offices. The towns became centres of opportunity both for socially mobile country folk and for the underemployed village workers in seasons of distress.

Caste differences began to surface in the society during the British rule. Higher caste residents of Tirunelveli town understandably opposed the movement of 'low caste' people and funeral processions along their streets. Most of the families of the town owned land and worked out appropriate routes for low caste funerals in spatially segregated mirasdar villages nearby. Such processions would not touch town streets at all but would move away to the cremation or burial ground unseen, through paddy fields and irrigation ditches.[285]

Until 1858, the corpse of those dead in the Government Hospital which was then in the town, passed without any problem out of the town through the new street (pudu theru) built at State's expense to connect the Pettai, the district headquarters office and Palayamkottai. Thirty nine bodies had passed along this route during 3 years before 1858 and 19 of these had been low caste, but more, it appears a 'Pallar'.*(David Ludden op. cit.p.189)*

In 1858, a pallar died of cholera in the Government Hospital then located behind the Nellaiyappar temple. The movement of the dead body along one side of the temple towards the new street was objected to by the people. The town people closed their shops and crowded into the streets to prevent the movement of the Pallar's body through the street. The Tahsildar reported this to the Collector. The Collector sent armed soldiers who carried the corpse not towards the new street, but rather around the temple, out of the main gate of the town and along the high road to Palayamkottai. The people still resisted which resulted in the use

of arms and killing about ten people and wounding many.[286] Higher caste people might have objected with such force to the Pallar's body being moved through their streets for fear that this would set the precedent of allowing even the low caste people to have free access to their streets. But more probably, the vehemence derived from the success two weeks before when resident's objection had altered the burial plan of a Christian weaver and more generally from confidence that their just cause enjoyed government support because a Collector had in 1853 ordered that standing rules remain in place for bidding objectionable low-caste movement through town streets.

Despite the violence, despite prolonged uproar in Madras Press and despite investigations that consumed several years, the town itself quickly returned to normalcy. Two days later an English officer observed,

> *I visited the town yesterday and again this morning; no excitment whatever appears; people wear their usual orderly and respectful demeanor and carry on their usual trades; in fact it is almost beyond belief that such an unfortunate event has occurred.* [287]

No similar incident happened again. Custom changed, at one stroke, to accommodate social forces that demanded free access to town streets than would be customary in Mirasdar villages, which were designed to segregate high caste residential space from pollution. The demand had come from the people whose physical mobility through the streets, labourers, artisans and hawkers, underpinned their llivelihood, whose cause had been taken up by both English Missionaries and by a reforming Collector who nullified the Collector's order of 1853. Though resistance came from the elite, it died down as the officials were firm in helping the ryots on the basis that the streets belonged to the Government not to any caste.[288]

Shanars or Nadars of the district embroiled themselves in a great many disputes, first over private property rights and then for access to temple honours. They were able to succeed in their case in course of time. While the dominant castes, - Brahmins, Vellalars and Vadugars, contested with one another for power and influence, the success of the Nadars posed a much more serious challenge to Maravars and Mirasdars in the district. Before 1859, individual Nadar families took up fight for tenant land rights. The hamlets of the Nadars developed in the outskirts of the mirasdar villages. The inferior dependent status of Nadars under mirasdar authority was customarily enacted not only in Nadar s payment of *Swamibagam* but also in Nadar payment of labour service, particularly at the temple festivals. In their dispute with Mirasdars, Nadars pursued

rights by the same means and with much same results as cultivating tenants generally did. Missionaries supported Nadar's efforts and the Nadar conversion to Christianity made the Tirunelveli district 'one of the bright spots of the heathen world' for the Church Mission Society. Village after village Nadars converted to Christianity. The Nadar converted established new self-sustaining communities with the help of the Missions. Schools and self-help societies enabled Christian Nadars to develop new village outside mirasdar control.

In 1857, a schismatic Nadar convert, called Sattampillai added something new to Nadar enterprise. He opposed Caldwell's opinion that Nadars were of low castes and he proceeded to formulate a new countervision of the Nadars. His message was that great Nadars had once ruled as proud kings in the southern Tamil Country. They had titles ***nattar*** or ***nadar*** but were toppled from power and subsequently oppressed by rulers who depended on wily Brahmins. Contemporary English men who wrote ethnographic and historical accounts of Tirunelveli and the people, though well aware of the new Nadar history of Sattampillai, discounted it and published accounts more in line with customary, less flattering images of Nadar tradition. Sattampillai's vision of oppressed Nadars seeking their rightful place in society also gained some importance for Mirasdars and their supporters, who concentrated their wrath on missionary efforts to uplift Shanars and spread Christianity stimulating heated exchanges in villages and in the press.[289]

Yet Sattampillai publicised an image of collective Nadar - identity, glory, degradation and aspiration. Despite their diversity Nadars lived in each agricultural zone and included very rich merchants in the north and poor palmyrah climbers in the south. Sattampillai's message really encouraged Nadars to look to the state to remedy their condition. Nadar's fortune no doubt rose most dramatically when compared to those of the two dominant groups who became notorious throughout the Century for opposing Nadar aspiration, Vellalars and Maravars. Village Nadars dug well, planted palmyra tree, produced garden crops and cotton and sold their produce in growing town markets. Urban Nadar businessmen became major figures in towns on the cotton road and the railway line as changing economic geography favoured Nadar merchant enterprise. The railway also induced a small diaspora among Nadar businessmen. Thereafter. social status became a pre-occupation among economically prosperous Nadar businessmen in the north. Their leaders exhorted aspiring Nadars to adopt customs, dress, marriage and dining that expressed higher caste status . They petitioned government for the official designation of their caste to be changed in all public records, most importantly the Census of India, from Shanar to Nadar. They sued in courts for access to temples, from which Nadar devotees were customarily excluded so that, they could

establish their new status in the patronage and worship of Gods.[290] The Nadars, demand for temple entry met with fierce resistance particularly from Maravars, who seem to have been most resentful of this Nadar attack on customary rules of access to sacred precincts in traditional Marava domains Conflicts centred around towns where Nadar businessmen prospered visibly and around villages where Marava and Nadar fortunes had moved in opposite directions for decades. Conflict over temple entry became increasingly tense during 1860s. The Government Policy decision to settle the temple entry disputes threatened peace in the district. During the 1870s, Court suits and street scenes flared when Nadars sought to worship deities in large temples in Madurai, Tiruchendur and Srivilliputhur. In 1878, a district munsif barred Nadars from entering Srivilliputhur temples but allowed Nadar procession on village streets. The issue for judges was whether to legitimize Nadar entry into sacred precints under state protection and thus to recognise a Nadar social status that custom denied. The Government vacillated while the Nadars asserted against higher caste opposition.[291]

The complex climatic upheaval occurred in 1899, in a season of severe agricultural distress in Tirunelveli and famine through Madras Presidency. Rich Nadar merchants petitioned to conduct a feast in a temple in the town of Kamudhi within the Zamindari - Estate of Ramanathapuram, near northern border of composite Tirunelveli district. By then the District Judge, High Court and Privy Council upheld the customary exclusion of Nadars from internal temple precincts. The law thus upheld and redefined custom in imperial terms.[292] The result was the serious riots involving Nadars and Maravars, the worst ever happened in the region. The back bones of the riots to the Maravars and the Nadars were the Raja of Ramnad and the rich Nadar merchants in the town respectively. The Maravar and Nadar gang attacked and counter attacked for days.[293] The Maravars roamed about ravaging the villages in Madurai, Ramanathapuram, Tirunelveli and Travancore. In June 1899, armed men raided the Nadar villages, burned down houses and threatened Virudhunagar and Aruppukkottai. Confronted with an alarming situation the British employed troops for the suppression of riots, F.V. Firth in command of the Madras Infantry intercepted armed and dispersed them. At Alangulam near Tirunelveli, the troops chased 700 rioteers and took thirty eight as prisoners. Near Palayamkottai, they found 5000 rioteers taking to heels. At Neelithanallur, another gang was dispersed. As the result of the judicial proceedings seven rioteers were sentenced to death and 545 were convicted. Violence abated slowly as the monsoon arrived later and moved back to the land in November-December 1899. The Nadar-Maravar conflicts once again raised its ugly head in 1918, during the great

food crisis due to First World War.[294] By that time a new political arena was created which was helpful to complete for rights . Caste political associations following the model of the Nadar Mahajana Sangam founded by rich Nadar merchants became a recognised institutional means for voicing demands in the media and in the urban context of government decision making.[295]

Underlying epochal change in this agrarian society, the pen insular-landscape and culture provided a substratum of continuity and constancy yet even the land and culture underwent subtle transformations as peasants made critical decision about how best to invest their time and energy. In villages, those peasant decisions produce rhythms of inner movement that altered the structure of rural society over generations and decisive action did not occur in a vacuum. Gradual but in the very long term dramatic change in the context of peasant decision making altered the import of decision which in aggregate, recreated the Tamil landsape and Tamil culture alike.[296]

Epochal expansions in the extent of agrarian interaction brought new ideas, technologies and actors into Tirunelveli region, which conditional peasant decision both by imposing constraints and by opening new opportunities. Local conflicts between the Nadars and the Maravars, the mirasdar's movement into government and politics, the scheduled community's efforts to find jobs in town and overseas are the factors that caused social changes in the district between 1800 and 1900. The villagers in this region shared with rustic folk worldwide the fate of being relegated to obscurity and robbed of history by cosmopolitan intellectuals working in metropolitan centres that dominated the world by the end of the nineteenth Century.[297]

Social dominance

The Tamil kings patronised Brahmin priests and teachers donated lands to them. The Agraharams and Brahmadeyasare the standing examples. The position afforded to the Brahmins by Tamil Kings and the increasing use of Sanskrit forms provided, the Brahmin dominance in government jobs . The non-Brahmins felt denied of social eminence enjoyed by the Brahmins. The literary tradition of the Brahmin gave them the initial advantage of western education and with the command of English, they entered the colonial administration, gaining a new status in addition to the old, thereby widening the gap between the Brahmins and non-Brahmins. The newly acquired status of the Brahmin created suspicion, if not hatred, in the mind of the non Brahmin.[298]

Among the urban non-Brahmin classes, there belatedly emerged an elite politically articulate and highly conscious of their lesser social

status and political power. In reaction to the nationalist movement represented by the 19th Century Hindu revivalism, which was expected to increase and fortify the position of the Brahmin caste, the non-Brahmins of the Madras Presidency sought to ally with the Colonial regime, believing that foreign rule would protect their position and in some way neutralise power differences within the upper strata of the society. Conscious of the vital role of literacy as the base of the Brahmin's virtual monopoly of government offices, the non-Brahmins elite also advised their communities to go in for education. The non-Brahmin movement emerged at the dawn of this Century.[299]

The Role of the District in the National Movement and Anti-Colonial outbreaks 1760-1900

The first salvo fired at the East India Company's growing dominance in the district was by Pulithevar of Nelkattumsevval though the Company had not emerged then as a territorial power but was only helping the Arcot Nawab in realising his tributes from the palayakkars. The gallant resistance to the Company's political growth by Pulithevar and his allies has been dealt with already. Following Pulithevar the martyrs to the cause of anti-British outbreak were Veera Pandya Kattabomman, Umaithurai, Sivasubramaniya Pillai, Maruthu Brothers, Sundara lingam, Vellaiya Tevan and a numerous soldiers in the armies of the palayakkars. The efforts of Maruthu brothers, Umaithurai, Sevethiah and other south Indian palayakkars and leaders to expell the foreign power from the country during 1800-1801 is called as the south Indian rebellion, the first ever organised movement against the British which was quelled by using modern arms and with the help of some of the native rulers. These personalities now mostly belong to Sivagangai and Thoothukudi districts. The palayams became zamins after 1801 and some zamindars in the district had courage to challenge the East India Company's administration. Valangapuli Thevar, the zamindar of Chokkampatti, for instance, had given as much resistance as possibile to the administration. He was behind an attack on the Sub-Treasury, Tenkasi in 1814. He had very loyal followers and spies in every government offices, and courts who passed information to him about the actions planned against him. Once in 1835, he questioned the ignorance of a judge who was hearing his petitions about the provision of Regulation-II of 1819 and later the judge realised his mistake as pointed out by Valangapuli Thevar.[300] The prize the zamindar had paid for his anti-British activities was the forfeiture of his zamin which he was able to regain by applying to the Court of Directors; yet the zamin became bankrupt in 1860s. The British records mention Valangapuli Tevan as notorious. But, his opposition to the Company administration needs to be hailed as an early attempt to sow a seed of the movement to drive the alien out of the soil.

Having confiscated the hostile Palayams and accorded zamindari rights to the loyal palayams, the East India Company ruled the district without much disturbance until its exit in 1858. The British Parliament took over the administration from 1858 by a Proclamation. The technical transfer of power from Company to Crown was not felt in the district and the colonial administration continued without much disturbance until the birth of the Indian National Congress in 1885.

South India and the Great Rebellion

Though many became martyrs at the altar of the anti-colonial struggle starting from 1760, Tirunelveli strivingly quiet during the Vellore Mutiny of 1806 and during the greater rebellion of 1857 in North India. At the same time, documents suggest that some attempts were made to induce Indian sepoys based in the south to revolt. 'Seditious placards' were found near several military cantonments in Tamilnadu during the year 1857. The Madras Government was far from complacent and a Seditioı ı Proclamation Act and an offence Against State Act were enacted in the Presidency to forestall any procipituous situation.[301]

Freedom Movement in Early Period

The earliest Modern political Association in Chennai was the Madras Native Association. Founded in July 1852. It was a subsidiary of the Hindu Literary Society set up in1830. By late 1853, the Madras Native Association had extended its influence beyond the city of Madras. It had subsequently persuaded local leaders in Cuddalore, Tiruchirappalli, Salem and Tirunelveli to start branches in order to help the parent Association with funds and information.[302] By 1884, it had become defunct to fade away giving rise to the Madras Mahajana Sabha.

Madras Mahajana Sabha

The formation of the Madras Mahajana Sabha in May 1884 could justifiably be called the forerunner of the Indian National Congress.[303] The patriots behind the formation of Madras Mahajana Sabha were G.Subramaniya Iyer, M.Veera Raghavacharior, P. Anandacharlu, C.V.Ranganatha Sastri, V. Bashyam Iyengar, Salem Ramasamy Mudaliyar and a few others. The Association was mainly concerned with pressing the government for greater measures of representation in local self government.

The Madras Mahajana Sabha deliberated upon all important questions of the day without fear or favour and was well known for its independence of thought and action. It did not mince words in stigmatising the cruelties, follies and injustices of the administration. In exposing the shortcomings of the authorities, it spared none, not even the Viceroy. After the formation of Madras Mahajana Sabha there was a perceptible change in the political

climate of the Presidency. It had a solid share in mooting, discussing and finalising the formation of the Indian National Congress.[304]

Indian National Congress

The first conference of the Indian National Congress was held at the Gokuldas Tejpal Sanskrit College in Mumbai on 28 December 1885. The inaugural Session was attended by 72 representatives of whom 21 constituted the Madras Contingent.

The Tirunelveli district has the pride of sending Peter Paul Pillai as the district's representative to the first session of the Indian National Congress.[305] The third session of the Congress was held at Chennai for four days from 27 to 30 December 1887. It was the first Congress session to be held at Chennai. The total number of delegates attended was 607 out of which, 362 were from the districts of the then Madras Presidency including the Tirunelveli district. Zamindars and Native princes attended the Congress as delegates. Chennai was the venue of the seventh, fourteenth and nineteenth Congress sessions in the years 1894, 1898 and 1903 respectively.

Rise of Extremism

The leaders of the Indian National Congress followed moderate means to achieve their goals. This was criticised by the leaders like Bala Gangadhar Tilak, Lala Lajput Rai and Bipin Chandra Pal. They were for the adoption of more forceful and direct agitational methods of struggle. The result was the emergence of two factions, the old party and the new party within the Congress. They were otherwise called the Moderates and Extremists. In Tamilnadu, G.Subramaniya Iyer emerged as the leader of the former group. The Russian Revolution of 1905 influenced political developments in India in a powerful way. Revolutionary poets, like Subramania Bharathi who hailed from Ettayappuram now in Thoothukkudi district (then in the composite Tirunelveli District), wrote and songs in praise of the changes taking place in Tsarist Russia. Bharathi compared Tsarist centocracy with British Rule in India and extolled the sincere efforts of the Russians to promote 'swaraj' and destroy autocracy. The Revolution in distant Russia coincided with a momentous events at home, the decision of the Curzon Government to bifurcate Bengal.[306]

The partition of Bengal in 1905 was resented by the people of the whole country. Anti-partition feeling ran high in the districts of Tamil Nadu. The leadership of Tamilnadu's new agitational policies comprised largely of young people in their twenties and thirties. They were S.Srinivasachari, S.N.Tirumalachari, M.P. Thirumalachari, C.Subramaniya Bharathi, V.O.Chidambaram Pillai (hailing from Ottapidaram of the present Thoothukudi district which a formed part of erstwhile Tirunelveli district),

V.Chakkarai Chetti Ethiraj and Surendranath Arya. These leaders came from varied social and economic backgrounds. Subramania Bharathi, a Brahmin by birth lived in poverty till his death. Bharathi started his chequered career at the Ettayapuram Zamindar's Court. He became a sub-Editor of 'Swadesamitran', a Tamil Newspaper started by G.Subramaniya Iyer, the founder of "The Hindu". Later, he edited Tamil Weekly ';India'. Bharathi held progressive views on social and political matters. A non-conformist and revolutionary, he promoted the course of liberation of women, social equality and social justice. His political views were equally forthright and uncompromising. He praised the 1905-Russian Revolution and later 1917 October Revolution.[307] V.O.Chidambaram Pillai of Ottappidaram came from a well-to-do middle class family. He studied in the Caldwell College, Thoothukudi. He worked as a clerk in a Taluk office for a while. After passing the Pleadership examination, he started his practice as a criminal lawyer in his home town. Had he not come into conflict with a certain Tirunelveli judge, he might perhaps have led a contended life as a prosperous pleader. His tussle with the judge forced him to seek fresh pastures in Thoothukudi in 1900. Until 1905 professional and journalistic activities consumed most of his energy. His literary interest got him the friendship of Pandi Durai Tevar, the President of Tamil Sangam at Madurai. Tevar assisted him a lot financially when he floated the Swedeshi Steam Navigation Company.

The Moderate - Extremist Rift in the District

The growing rift between the 'old' and 'new'parties in Tamil Nadu became apparent after the launch of swadeshi movement in the wake of the 1905-Congress session. On 19 January 1906, the secretaries of Madras Mahajana Sabha - G. Subramania Iyer, G.A. Natesan, K.B.,Ramanatha Iyer, Srinivasa Sastri, Venkata Renga Rao and Venkatnarayanayya assembled at the request of Krishnasamy Iyer and decided to promote swadeshism through a series of public meetings. Circulars were sent to the branches of the Sabha in the districts including Tirunelveli.

Tirunelveli Conference, 1906

In 1906, the Fourteenth Madras Provincial Conference was held at Tirunelveli bringing together important leaders from all over Tamil Nadu under the banner of Swadeshism. The leaders who spoke at the Tirunelveli Conference were G.Subramania Naidu, C.Karunakara Menon (both from Chennai), Vijayaraghavachariar from Salem, V.Sanjivi Rao from Tiruchirappalli, N.K. Ramasamy Iyer from Thanjavur, Sethurayal from Kumbakonam, V.C.Seshadri and N.Krishnamachari from North Arcot, A.Rajaram Iyer and G.Srinivasa Rao from Madurai and Govindasamy Naidu from Chengalpattu. The district leaders who participated in the

Conference were V.O.Chidambaram Pillai, Paul Appasamy, K.R.Venkat Rama Iyer, Singampatti Zamindar, Gurusamy Iyer, N.R.Ramakrishna Iyer and Vedamoorthy Muydaliyar.[308]

In the Tirunelveli Conference, differences between the old party and the new party surfaced on a host of issues. The proceedings at Tirunelveli Conference reflected the views and pre-occupations of the Madras Mahajana Sabha. The 'memorial' (memorandum) submitted to the British Government by the President of the Conference fully reflected the old style politics of 'mendicancy'.

> "The elevation to high administrative posts of
> Indians who are themselves the product of
> English education and enlightment
> and who are best fitted to act as
> interpreters in the government of the country,
> between the rulers and the ruled, will in the
> humble opinion of your Memorialists,
> deepen the foundations of British dominion
> in India and help to increase the material
> prosperity of the people".[309]

The delegates not only affirmed full co-operation to the British government but also regulated the spirits of the members of the 'New Party' and the emerging 'Swedeshism'. Members of the new party, dissatisfied with the proceedings held a parellel 'Swedeshi conference' at Palayamcottai, under the chairmanship of G.Subramania Iyer[310] Here the new party determined to evolve its own approach to Swadeshim, irrespective of the Resolution passed in Tirunelveli conference.

The gap between the extremist members and others of the Madras Mahajana Sabha widened as the Calcutta session of the Indian National congress in 1906 was approaching. Anticipating the strategy of the old party B.C. Pal and Tilak wrote to the Chennai based extremist leaders asking them to attend the Calcutta Congress in order to strengthen their hands. Four persons were elected to represent the Tamil Nadu New Movement at Calcutta and one among them was Subramania Bharathi of composite Tirunelveli district.

The significance of the 1906 Calcutta session of Congress for the National Movement in Tamil Nadu is highlighted by two sets of comments from V.O.Chidambaranar, perhaps the central pillar of the New Movement in Tamilnadu. A few weeks before the Calcutta session, in October 1906 V.O.Chidambaranar had cautioned the people that Swedeshism must not be taken to mean a boycott of foreign manufactures. But three months after the 1906 Congress session, the concept was so changed that V.O.C. himself declared that the Swedeshi Movement could not exist without

boycott. It was not only foreign goods but everything foreign should be boycotted, and if swadeshi and boycott were vigorously pursued the inevitable result would be the attainment of swaraj.

Bipin Chandra Paul, one of the core extremist leaders visited Madras on 30 April 1907, accompanied by Subramania Bharathi. He was greeted with slogans like "Vande Matharam." Though it was proposed that he would address the public in the districts, it was called off as a protest against the arrest of Lala Lajpat Rai. In the wake of Bipin Chandra Pal's visit, political atmosphere in Chennai and in the districts underwent a dramatic change.

Tamil Nadu and the 1907 Congress split

As the Surat Congress session approached, both the 'old' and the 'new' parties were busy in preparing resolution and delegation. By that time Keir Hardie, a Labour Party member of the British Parliament visited India and was received by both the parties with warm welcome .One of the districts that he visited was Tirunelveli. The Member stressed the need for unity in the nationalist camp of Tamil Nadu and urged the other members to forget their differences and to unite in order to attain the objectives.

In the Surat session, the new party leaders determined to have their own say. In a public meeting organised by the party C.Subramania Bharathi proposed two of the four resolutions. His resolution stated that 'this meeting seriously condemns the action of the Reception Committee at Surat in not having consulted the other provinces in the matter of electing the president of the congress and in having overlooked the claims of Lala Rajpat Rai to the same.

The Congress was split into extremists and moderates in the end of the Surat session. C.Subramania Bharathi wrote in the journal Bala Bharathan about the split thus:

> To many the ending of the Congress, an institution which
> has instrumental in bringing together diverse nationalists
> and creeds that inhabit the vast land, is considered
> national calamity . . . . .Are we to mourn or
> rejoice for the death of Congress."[311]

Tirunelveli Swedeshi Coins

The Congress split at the 1907 Surat session had an important impact in the politics in Tamil Nadu. G.Subramania Iyer, the extremist leader visited Tirunelveli in 1907. The people of Tirunelveli extended warm reception to him. Bharathi published his first collection of political songs in a volume, 'Swadesa Geethangal'. His songs stressed the importance of unity, condemning casteism and urging the people to form a united front against the British. Nationalistic forum and thoughts were imbibed in the people by

swadeshi lectures, discourses and coins. Swadeshi coins were manufactured as an ornament. These coins were minted in Tirunelveli, Thoothukudi and Chengalpattu in Tamil Nadu. Several types of swedeshi gold coins were in circulation. One type of coin had the word 'Swadeshi' with letters being encircled by a wreath with legend , "Chastity over household divinity". On the reverse was inscribed 6 1/3 MJDS 1907' again encircled by a wreath etched with faith, hope and success. A second type of coin carried on one side the word' 'South India' encircled by an ornamental wreath on the reverse was found the figure of the Goddess Lakshmi. On a third type of coin the words 'Indian Gold' appeared, encircled by a wreath with legend God Bless Five Neck Jewel 1907' On the reverse was the Goddess Lakshmi in a standing posture with legend "Lakshmi in Lotus". Two of the patriotic goldsmiths who were engaged in making these coins in Tirunelveli district were Narayana Asari (Palayamkottai) and Shanmugam chetty (Tirunelveli)[312].

Swadeshi Movement

In October 1905, National Co-operative Society of Mumbai sent one of its members to Tirunelveli to deliver lectures on the Swadeshi Movement. He spoke on topics such as 'Separation of Executive from Judiciary' Representation of Indian grievances in the House of Common. The demand for an equal share in higher appointments for Indians and the curtailment of expenditure on the Indian army. These speeches enabled the people to gain some ideas about the issues deliberated at the national level.[313] The Swadeshi movement in the district received another fillip in August 1906 when G.Subramania Iyer visited Thoothukudi to preside over the Swadeshi anniversary meeting. In 1908 when an European circus company the Abel Circus, performed in Tirunelveli town, it was totally boycotted by the people as it was foreign. Following Tirunelveli example, the people of Nagapattinam and other towns also boycotted the circus.

Coral Mills strike

By the end of the 19th Century three large spinning mills were started in the composite Tirunelveli district in Ambasamudram, Thoothukudi and Koilpatti. Working conditions of workers in these mills were bad. On 27 February 1908, the workers of the Thoothukudi Coral Mill struck work demanding reduction in working hours and a pay hike. The workers' cause was espoused by V.O.Chidambaram Pillai. Relief centres were started by public contribution to feed the striking workers. One day, the Harvey brothers, the owners of the Mills, while travelling along Palayamkottai road were confronted by a jeering crowd which pelted them with stones, Significantly not a single member of the crowd was a Mill worker. It showed the public sympathy for the strike. Workers in mills and factories in and around Thoothukudi, as well as in other parts of Tamil Nadu went on demonstrating their solidarity with the Coral Mill workers.

In early March, the workers of Burma Oil Company struck work following the beating of two workers, Veerasamy Naidu and Gopalsamy Naidu, by a member of the management. The workers complained to the District Magistrate demanding the dismissal of the person who assaulted the two workers.[314] In the assessment of the District Superintendent of Police at Tirunelveli, P.P.Sweeting, the root cause of this rapidlygrowing unrest was seditious preaching, not only in public but also in endless behind the scene activities.[315] His report says " As far as I can judge the effect of these lectures (the speeches of V.O.Chidambaranar and others) on the lower classes is to decrease their respect of the European and the authority of the Government servants. Some of the classes attended the meetings to discuss subjects dealt with in the lectures, but few have much idea of them. They look upon the lecturers as bold patriots and admire them, believing that they are reaching them to better themselves. Some of the lower orders are doubtless prepared to follow any advice given by Chidambaram Pillai and Subramania Siva and such men are the mischievous persons"

In the Swadeshi movement the students of the district in particular, the students of the M.D.T. Hindu College, Tirunelveli, inspired by the speeches of V.O.Chidambaram Pillai, Subramania Siva and others took part in a big way.

The Swadeshi Steam Navigation Company

From the time of the palayakkars to the late eighteenth Century, the people of Tirunelveli had earned a reputation for their pronounced anti-colonial feelings. The way they responded to the Swadeshi Movement and the Indian Nationalism reflected their characteristics of resistance and struggle.[316] The first clarion call to the Swadeshi Movement in Tamil Nadu belonged to Ramakrishna Iyer, a Tirunelveli based lawyer who in 1905 addressed the people to boycott the foreign made goods. The Swadeshi movement gained momentum after the entry of V.O.C. in to politics.

V.O.Chidambaram Pillai floated a Navigation Company called Swadeshi Steam Navigation Company to pursue the objectives of Swadeshism and boycott with exceptional vigour. In the process, he transformed the Tirunelveli district into a hot bed of extremist politics to the dismay and anger of the colonial authorities. V.O.C's Navigation Company was registered at Thoothukudi. This venture earned him the title *Kappalottiya Tamizhan* (The Tamil who sailed a ship)The ship was plied between Thoothukudi and Colombo. The quick progress of the Company was a rude shock to many European merchants. The patronage extended by the Swadeshi merchants enabled the Swadeshi Company to earn profits five times to that of the British Navigation Company. This created great animosity between the British Navigation Company and the Swadeshi Steam

Navigation Company. The rivalry between the British and the Swadeshi Steam Navigation Companies led to a further estrangement between the colonial rulers and the people causing much anxiety to the Madras Government.

Subramania Siva

Born in Battalagundu in Madurai district and matriculated Subramania Siva worked for sometime as a clerk in the office of the Superintendent of Police, Sivakasi. He became a militant and effective champion of the Swadeshi Movement and moved to Tirunelveli district.

Tirunelveli Lawyers' Swadeshi Sangam

V.O.Chidambaram and Subramania Siva were aided in their efforts by a number of Tirunelveli based lawyers including Sadhu Ganapathy, T.V.Krishnasamy Iyer, G.G. Ganapathy Sastri, S.V. Krishnasamy Iyer and M.Sankaranarayana Iyer. [317] The lawyers formed themselves into an organisation called the Swadeshi Sangam or National volunteers. Other Swadeshi leaders in the district were Gurunatha Iyer, a former police constable, school master Loganatha Iyer and Padmanabha Iyengar.

Padmanabha Iyengar

Padmanabha Iyengar was a graduate of Pachiappa's College, Chennai where he obtained a University Rank in his subject, Political Economy. He worked for a while in the Tirunelveli Collectorate and had good experience in journalism. Along with V.O.Chidambaranar and Siva, he made a number of rousing public speeches in support of Swadeshism.

The 'Tinnevelly Riots' of 1908

A major confrontation between the patriots of Tirunelveli district and the District authorities was brewing owing to many factors including the V.O.C.'s Navigation Company, Mill strikes and the fiery speeches of nationalists. From January 1908 onwards, a series of political meetings were conducted in the dry beds of the river Tamiraparani in Tirunelveli town. The British Intelligence Reports noted the socially diverse nature of the meetings which were attended by people from widely divergent class backgrounds. Speeches delivered at the meetings invoked the concepts of Swadeshism, boycott and Swaraj and were anti-imperialistic in tone and spirit. The bureaucracy swung into action. L.M. Wynch was the then Collector. V.O.Chidambaranar, Siva and Padmanabha Iyer, who were delivering fiery lectures, were asked by the Collector to appear before him in Tirunelveli on March, 1908 to bind them over on 'good behaviour' under Section 108 of the Criminal Procedure Code.

After the Coral Mill strike in Thoothukudi, the centre of action shifted to Tirunelveli. On Monday, 9 March, V.O.Chidambaranar, Siva and Padmanabha Iyer appeared before the Collector, Wynch in Tirunelveli. Wynch demanded guarantee for the 'good behaviour' and the trio refused to offer any such guarantee.

On the evening of the same day, V.O.Chidambaranar, Siva and Padmanabha took part in the celebration of B.C. Pant's release, organised in Tirunelveli town. The next day the celebration was organised in Thoothukudi. After attending the Thoothukudi celebration, once again appeared before the Collector Wynch on March 10. During the hearing which continued till March 12, Wynch decided not to leave the agitating leaders. As the legal provision required, V.O.Chidambaranar, Siva and Padmanabha offered guarantee for their good behaviour on March, 12, but, Wynch refused to accept it and remanded them to the district jail adjourning hearing until April 1.

The people of Tirunelveli got infuriated by the acts of the Collector and the district became engulfed in riots. *The Hindu* condemned the arrest of the leaders as illegal and observed that it was the immediate cause of the riot. [318]

March 13, 1908

The following day , shops in Tirunelveli town were closed and thousands of angry people gathered on the streets on Friday 13, March 1908. Sweeting, the District Superintendent of Police, Tirunelveli, met the Collector by 11.00 A.M. and requisitioned the services of Reserve Police from Palayamkottai and Tiruchirappalli. The people began to attack government buildings in the town and the Collector's bungalow located at Veeraghavapuram. The Municipal office building, post office and police station of Tirunelveli town were set on fire and a number of street lamps were smashed. In the melee, the police party became sandwiched between sections of hostile crowd while from neighbouring house-tops stones and bricks rained down on their heads. It was at this point that Wynch gave the order to open fire,. Four persons were killed on the spot and several others wounded. In a telegram to the Government immediately after the shooting episode, the District Superintendent of Police, Sweeting remarked that the harsh punishment had been imposed on the people of Tirunelveli keeping in mind the lessons of 1899 and to drive home the point that the Government was not as feeble as the popular idea and sedition monger imagines., The 1899 incident Sweeting had referred to was the 'Sivakasi riots' which ended in the death of about 21 persons and destruction in fire of a large number of buildings. From Sweeting's note, it appears that the repressive action against the agitators was pre-decided. [319]

The arrest of V.O.Chidambaranar and the consequent repressive acts were aimed not only at restoring law and order in a politically conscious region of Tamilnadu, but also designed to remove the threat to British commercial interests and to the British hegemony posed by the Swadeshi Movement in Tirunelveli. The fatal offshoot of the repressive measure was the dwindling down of the fortunes of V.O.Chidambaranar's Steam Navigation Company. It became non-existent by 1911. The failure of the Swadeshi Navigation Company, the first major swadeshi enterprise in southern India, was a set back, albeit temporary, to the cause of indigenous capitalist development and the swadeshi movement.

In the years 1906-08 Tirunelveli and the port town, Thoothukkudi emerged as important centres of nationalist mobilisation focused on Swadeshi initiatives. The events in Tirunelveli and Thoothukudi in March 1908 were to acquire powerful symbolic value in Tamilnadu. At one level, they could be seen to usher in a historic defeat; in their wake, the colonial authorities invoked a range of repressive measures and there was a receding of the nationalist tide. It was in this context of set back and disarray that revolutionary terrorism could surface in Tirunelveli district in the years immediately after 1908. But, the combative anti-colonial spirit that characterised the Swadeshi movement in Tirunelveli was not so easily crushed. The images of struggle and National assertions left behind by V.O.C. and his talented lieutenants continued to inspire the people of Tamilnadu. [320]

Tirunelveli 'Sedition' Trial

In Tirunelveli district, top Swadeshi leaders, including V.O.Chidambaram and Subramania Siva, were charged with Sedition under Sections 124 A and 153 A of the Indian Penal Code. Padmanabha Iyengar was spared as the Advocate-General expressed doubts as to whether there were strong enough grounds for his prosecution. The Collector Wynch decided against prosecuting Padmanabha Iyengar.

On the request of the Collector, the prosecuting Inspector of Police, Tirunelveli and the Public Prosecutor, Tirunelveli were replaced on the grounds that the former was not good enough and the latter was one of the former Directors of Swadeshi Steam Navigation Company. The Government duly sent E.P. Powell, a Government pleader from Madras to represent the Crown in the Tirunelveli cases and appointed Arthur Francis Pinhey, the Madurai Sessions Judge, as Additional Sessions Judge, Tirunelveli. The Collector, Wynch also requested the Madras Government to send an Additional Magistrate to help him expedite the Tirunelveli cases. The name of Azizuddin was proposed, but Governor Lawly ruled out this choice, noting that "we can certainly be accused of selecting a Mohammadan to twist the tail of the Hindu and I see no particular advantage

in sending a native to Tirunelveli just now".[321] Subsequentlly, E.H. Wallace was made the Additional District Magistrate, Tirunelveli and it was he who committed the case to the Sessions Court.

Despite observing the legal procedures without having any loop holes in favour of the leaders, the High Court was moved by the leaders earlier for bail as the Collector refused the same sensing that the High Court order would be favourable to the leaders. The Government wrote to the Collector to prepare for the eventuality. Wynch in his reply requested the Madras government to sanction prosecution pointing out that the prestige of the Government was at stake. Wynch wrote-

> *the Government now had a splendid opportunity which may never occur again of punishing these really dangerous political criminals. Let these men get out of jail again with a light sentence or no sentence at all and within the next five years we shall have not only riots in Tirunelveli and Thoothukkudi but all over South India, including Madras city.* [322]

When the Madras High Court ordered the release of V.O.C. and Siva on bail, the Government, therefore, countered by issuing an order for the prosecution of the Tirunelveli leaders. Wynch 'honoured' the High Court order by releasing the prisoners but, immediately re-arrested them. Two cases were filed against V.O.C., the first case was for making Seditious speech on 9 March 1908. The following extract from his speech was considered 'seditious' by the Government.

" It was foolish to expect that an administration conducted by foreigners would be calculated to benefit natives. So long as the Government was vested in the hands of the English, the country much necessarily suffer India (was) getting poorer every year.....(there were) three ways to restore her to her original riches, viz., Swadeshism, Boycot and Industry".

In the second case, V.O.Chidambaram was charged with abetting the sedition of Subramania Siva in his seditious activities. Siva faced four charges of sedition. The defence lawyers for V.O.C. were N.K. Ramasamy Iyer, Sadagobachari and Narasimhachari and for Siva Paul Peter Pillai and A.S.Cowdel. The number of witnesses marshalled in Tirunelveli for the seditious trials reached astonishing heights. A total of 927 witnesses were detained for the sedition case in which V.O.C. and Siva were implicated together with the number of 'riot' cases relating to March 13, 1908 events. This was the highest number of witnesses ever before involved in a case in the Madras Presidency. No fewer than 327 persons were eventually cited as witnesses in the "sedition" trials alone although in the end only 97 of them were actually examined. The trials were also expensive in terms

of judicial time. The sedition case alone occupied Additional Session Judge A.F. Pinhey for twenty five days.

The composition and number of the Assessors involved in Tirunelveli 'Sedition Case' was never to be revealed. When Sir Henry Cotton raised a question in the British Parliament regarding a difference of opinion among the Assessors in the Tirunelveli trials, the Madras Government was asked to clarify this point. Although the latter admitted that European Assessors were empaneled in the case tried at Tirunelveli, nothing else was ever mentioned about them, either in the explanation sent to the Under Secretary for India or in the judgements delivered in the Sessions Court.

Finally, on 7th March, 1908, V.O.Chidambaram and Siva were found guilty of the charges against them. Judge Pinhey sentenced Siva to 10 years transportation while V.O.Chidambaram received the maximum punishment of transportation for life. In the second case also V.O.Chidambaram was punished with transportation for life, to run concurrently with the first one. Soon after the sentences were passed, the Collector Wynch remarked, "I think the people are stunned at the heavy sentences. They begin to realise at last that the offences of preaching sedition is a grave one... I don't think any one will dare to works against British Raj again" [323]

However, appeal to the Madras High Court brought some reduction in the sentences. On 4 November 1908, a Bench consisting of Chief Justice Charles Arnold White and Justice Miller reduced V.O.Chidambaram's concurrent sentences of transportation for life to six years transportation again to run concurrently. While upholding the conviction of Siva, the High Court reduced his sentence to six years transportation. V.O.Chidambaram and Siva were released only on 24 December 1912. It was decided to place them at once under survillance by posting a sub-inspector and a head constable to watch all their movements. When V.O.Chidambaram came out of Cannanore Jail, there was none except his bosom friend Ganapathi Pillai of Cannanore and Subramania Siva, who was also just out of jail, to receive him. This was in painful contrast to the sea of people that gathered to see him off to jail in 1908. Needless to say that his well-wishers refrained from welcoming him not because they loved V.O.Chidambaram less, but because they feared more about the consequences of such an act in the prevailing climate. In the case of Siva, it was not proposed to impose any restrictions as the Government was certain that with his health so seriously impaired, he might not give any trouble. Many papers throughout India expressed the happiness at the release of V.O.Chidambaram and Siva whose case next to Balgangather Tilak created a profound sensation throughout the country. They showered praises on Pentland the new Governor of Madras who ordered their release

and castigated Lawley, his predecessor for his failure to do so notwithstanding the repeated appeals from the wives of the victims for the release of their husbands or grounds of health. The two great sacrificing patriots - V.O.Chidambaram and Siva died in penury. But, they had their rewards too. As Cicero says, "If so his country, a man gives all, he becomes entitled to what all money cannot buy - the external love of his fellowmen". This the patriots had in abundant measure.

The Tirunelveli 'Riot' cases

In the wake of the events at Tirunelveli and Thoothukudi, on March 13 a large number of people were arrested and put on trial in what came to be known as Tirunelveli 'riot cases'. The cases divided into three batches of about twenty prisoners and each was heard over a period of 20 to 30 days. Altogether 45 citizens of composite Tirunelveli district were convicted of involvement in the disturbances and were awarded sentences varying from one year to seven years rigorous imprisonment. Loganatha Iyer, however, was sentenced to seven years' transportation. While passing sentence, the judge expressed the hope that this punishment might deter the present generation of Tinnevellians at any rate, from indulging in similar outbursts in future. When the prisoners appealed to the Madras High Court, their sentences were confirmed.

The Tirunelveli Vakil Cases

The district authorities decided to proceed against the 'Vakils' who were in active politics. The District Superintendent of Police informed the Collector Wynch that the Vakils of Tirunelveli had been very much part of the insurrection and recommended that they be prohibited to practise in the courts of law. Wynch who was also of the opinion, wrote to the Madras Government that the 'Vakils' ought not to be allowed to go scotfree. [324] The Public Prosecutor was directed to draw the attention of the judges of the High Court to the 'sedition' conduct of certain 'vakils'.

Three lawyers, - Krishnasamy Iyer, Ganapathy Sastri and Sadhu Ganapathi Panthulu of Tirunelveli were then charged with sedition. The case was admitted in the High Court on 2 May 1909. From the beginning, the Public Prosecutor laboured hard to thrust the serious guilt of sedition upon the three accused. He argued that Krishnasamy Iyer and Ganapathi Sastri were so culpable that they ought to be standing in the dock in the company of V.O.Chidambaram and Siva. As for Sadhu Ganapathi Panthulu, his office in Tirunelveli had been visited by V.O.Chidambaram on March 13 disturbances. The charges finally levelled by the Public Prosecutor related to the issue of leaflets and to organising and participating in a meeting of seditious nature which according to him contained seditious matter on March 1908. However, the Judges could not be convinced by the Prosecution. and the cases were dismissed..

Reprisal against the Public

Repression was let loose not only on the political leaders of the district but also on the general public who had extended their support to the Swadeshi Movement. There were sympathisers of the movement all over the district especially in the towns of Sankarankoil, Tenkasi, Ambasamudram and Kallidaikurichi. The police forces in the areas were beefed up. The Government also instructed Wynch to deal with all claims for loss of property, attributable to the 'misconduct' of the inhabitants of Tirunelveli. [325] Leading citizens of Tirunelveli including P.M. Kailasam Pillai, Chairman of Tirunelveli Municipal Council did their best to persuade the Government to withdraw the punitive tax, imposed on the people to compensate the 'riot' loss, but of no avail. In effect, the entire district was being made to pay the price of its support for the Swadeshi cause.

Even the Press which had covered the Tirunelveli episodes was not spared. *The Hindu*, founded in Madras in 1875 and owned and edited by Kasturi Rangan Iyengar, a key extremist leader from 1905 onwards gave a wide coverage on the Tirunelveli 'riots'. In its issue dated 16 March, 1908, *The Hindu* held Wynch, the Tirunelveli Collector, responsible for the shooting incident . In the paper's view, Wynch had precipitated matters by striking a shop attendant across the face with his whip. Immediately stones were pelted at Wynch and it was in this context that he gave the order to fire as a result of which four persons were killed. [326] Turning the allegation not only false but also defamatory and libellous, Wynch requested official sanction to institute proceedings against the Editor of the paper. Within a few days of its original story, *The Hindu* was forced to back out. It published an explanation terming its earlier report on the firing at Tirunelveli as 'incorrect'. The Government reprimanded *The Hindu* observing that its reporting had not only impugned Wynch's character and reputation as an official but had also seriously affected the Government, 'whose policy in regard to Tirunelveli matters has been based and must continue to be based on Mr. Wynch's reports. While *The Hindu* escaped prosecution, it was placed under constant government scrutiny. [327] *Swadesamitran* edited by G.Subramanya Iyer *India* edited by M.Sriniva Iyengar were also proceeded against by the government for their connection with the Tirunelveli incidents.

V.O.C. and Siva in Prison

Though the High Court awarded the sentence of transportation to VOC and Siva, the Government put them in prison under Rigorous Imprisonment and tortured them. When it petitioned to the British Parliamnent, it sought the reply of the Madras Government which wrote to the Secretary of State of India that the "offences committed were serious and the sentences passed by the High Court are not in our opinion

too severe". It further defended that transportation could be converted into one of imprisonment simply by amending the Section 403 of the Cr. P.C. VOC was transferred from Palayamkottai jail to Coimbatore Central Prison, where he was subjected to innumerable brutality including the pulling of oil press. Subramania Siva was transferred to Tiruchirappalli Jail from Palayamkottai where he was given the hardest work and all sorts of troubles. He contracted leprosy in the prison. Siva was not the only Swadeshi prisoner to contract leprosy . Ramasubban Chetty, Palani Pillai and Sabapathi Pillai, the three prisoners sentenced to rigorous imprisonment in 'Tirunelveli Riot' case also became afflicted with the dreaded disease. Despite many petitions, Siva served the full term of imprisonment and was released only in1912. P. Kesava Pillai was a member of the Madras Legislative Council then who represented the woes of the Swadeshi prisoners in the Council.

The Moderate's Reaction

While the 'riot' was on in the district, a deputation of the moderates in the district comprising K.R.Gurusamy Iyer, M.R. Ramakrishna Iyer, S.S. Mohmmed Abdul Khadhar Maraikayar, S.V. Nallaperumal Pillai and N.A.V. Somasundaram Pillai met Arthur Lawley, the Governor and politely represented that the people of Tirunelveli district were incapable of indulging in violence. The Governor did not accept the contention of the members and told them that the riot speeches of VOC and others caused much damage to the Government. Arthur Lawley, the Governor further told the members of the deputation that the leaders of Thoothukkudi did not move their little finger though they were requested by Wynch to assist him in suppressing the riots.[328] The deputation thus failed in its attempt to convince the Governor. *The Hindu* also published a letter from one of the readers which pointed out that, "the thorough failure of Tinnevelly deputation will, I hope open the eyes of our countrymen to the futility of adopting the mendicant policy which is being so strongly advocated by some of our good friends. The *Swaraj* paper described the members of the deputation as 'Cowards'. '*Swadesamitran*' ridiculed the idea of deputation. The paper wrote under the caption, "The whipping of the Moderates" The paper remarked that 'the moderates of Tinnevelly went for a bath and returned having smeared (their body) with mire" Referring to the failure of the deputation Swadesamitran - observed, "we do not know where Mr.Gurusamy Iyer, Mr.Ramakrishna Iyer and the other merchants, who went with the belief that they would achieve something extraordinary, will hide their faces now? Finding the gravity of the siituation, the Madras Mahajana Sabha appointed a Sub-Committee to consider the advisability of non-official Commission to enquire into the disturbances in Tinnevelly.[329]

Reaction of the Press

The nationalist press reacted sharply to the arrests of the leaders and attributed the riots to the mistakes committed by the local authorities.

The 'Swadesamitran' which referred to these development pointed out that sometime back the cry of Bande Mataram was uttered only by school boys and youngsters. But, now after the incident, even old men and women have realised the significance of this national cry and have begun to use it as a watchword. The paper had a dig at the Collector and other officials who were responsible for the predicament. "Great indeed is the valour of the white Superintendent who mercilessly shot down five innocent youngsters when there was no necessity for it. Great indeed is the courage of White Collector who ordered the police shoot" - are the comments of the paper.

The *Liberal* blamed the Europeans who were "trying to convert Tinnevelly into District of Eastern Bengal" *The Indian Sociologist* expressed its shock over the way in which the Indians were "butchered at the instance of the British Government" at Tinnevelly. The paper suggested that the safest plan for Indians would seem to be to organise secret societies to drive the English out of Indian soil". *'The Indian Patriot'* attributed the riots to the mistakes committed by the local authority. *The Hindu* went one step further and regarded the shooting as gross outrage. *The India* published a cartoon describing Wynch as smoking the Cheroot (of justice) near gun powder (symbolic references to the patriotic people of Tinnevelly). Explaining the Cartoon the editor pointed out that the people were provoked by the unjust measures by the Government. The subsequent issue of the same paper published a cartoon which became very famous. The cartoon showed the presentation of a medal to Wynch by the king of bafoons for the able way in which the former suppressed the Tirunelveli riot. The Buffoon was depicted to have uttered the following words"

> "Brewo! Mr. Wynch you are the only man that truly deserve the name of a warrior. You waited till all the infuriated rioters had dispersed and then entered the town and shot down innocent passers by. Even the ancient heroes of India like Arjuna and Shivaji cannot be compared to your valour..."

The same issue contained an imaginary conversation between V.O.Chiidambaram and the Collector Wynch in which VOC's statement was , "we will no longer be slaves to foreigners in our own land and we will no longer be cowards". This piece of literature became so popular that the translated version of the said extract was cited as an evidence in the Ashe murder case to show how such writings provoked the feelings of the public. The 'liberal' in its issue of 22 March 1908 published an open letter to the Collector of Tirunelveli. The paper cautioned the Collector in the following manner: "Tinnevelly has been the grave of the reputation on

many civilians and you are the last mariner who has been wrecked on the rocky coast of Tinnevelly. No useful purpose could be served by any European officer parading on the spirit of Homeric heroes in the public streets with a revolver in one hand and a riding whip in the other".... The letter ended with the following sarcastic remarks,

> I beg to remain Sir, your candid critic, The Duke of Tinnevelly Bridge"

Various newspapers such as *the Wednesday Reviews, The Madras star, Kerala Patrika, Desabhimani Hindu Nesan*, wrote editorials condemning the Collector and the police. The reaction of the native newspapers, however, with few exceptions, 'clearly revealed the fact that they extended their whole hearted support to the Swadeshi Movement. No doubt, there were few papers which supported the Government. The Madras Mail which was pro-British wrote in the issue of 14 March 1908 that the 'spirit of nationalism is an infection which spread rapidly to the other parts of the District. The Government of Madras have shown quiet unmistakably that they do not intend to allow unrest of this kind to brew and endanger the peace of any locality in the Presidency. [330]

Revolutionary Terrorism in the District

When the repressive measures imposed by the Madras Government following the 'Tinnevelly Riots' drove nationalist activity in Tamilnadu increasingly underground, the French settlement of Pondicherry became an important centre of nationalist activity. A revolutionary triangle comprising London, Paris and Pondicherry now took shape. [331]

India House in London with which were associated Shyamji Krishna Varma, V.D.Savarkar, V.V.S. Iyer and M.P.T. Acharya and Indian Society of Paris with which was associated Madam Cama were the foreign bound Indian leaders who sought to achieve the unity of Indian people by breaking caste barriers and cultivating a high sense of patriotism and fearless generations of India. They believed that the founding of secret societies, the collecting of arms and the provision of military training were essential to India's liberation struggle. For these revolutionary leaders Pondicherry gave asylum. Bharathi also shifted to Pondicherry and carried on his patriotic journalistic work. The organs with which he was associated were *India, Vijaya, Suryodayam* and the *Independent*. V.D.Savarkar's *magum opus, "The First war of Indian Independence"* (highlighting the 1857 episodes) from Paris and other pamphlets instigating revolution were smuggled into Pondicherry and from there to other parts of Tamilnadu. The CID Reports of the Madras Government confirmed the circulation of the literature instigating revolution. Postal Act was amended so as to open the suspected letter or parcel. C.I.D. Reports from the period 1908-

1911 highlighted the serious nature of the threat which the revolutionary movement in Tamilnadu and Pondicherry was seen to pose to British interests. Some Reports submitted to the Government of Madras even predicted a revolution similar in scope to that of 1857. The British continued their efforts to nip in the bud the perceived revolutionary threat in the South but revolutionary groups moved steadily in the direction of conspiratorial methods and acts of terrorism directed at individuals. This trend was accentuated by the arrival in Tamilnadu of revolutionaries from Bengal, some of whom in the disguise of 'Sanyasis'. Frequent visits by Bengali extremists to Tirunelveli and Thoothukudi and adjoining areas appear to have contributed to transform the southern district of Tamilnadu into something of a revolutionary base. A key role in this transformation was played by Neelakanda Bramachari.

Neelakanda Bramachari

Born on 4, December 1889 at Erakkoor village near Sirkazhi in the present Nagappattinam district, Neelakanda Brahmachari moved to Tiruvananthapuram after schooling and later to Madras where he took a clerical job with the Triplicane Co-operative Society. In Triplicane, he got acquaintance with Bharathi who introduced him to revolutionary journalism. Along with Bharathi, he also moved to Pondicherry and gradually became the Assistant Editor of 'India', and Sub-Editor of 'Vijaya' daily. In the wake of the 'Tinnevelly Riots' Neelakandan visited several parts of Tamilnadu on mission to establish revolutionary groups. He toured the Tirunelveli district and founded a secret revolutionary organisation called the Bharatha Matha Association in Shengotta then formed part of Travancore Princely State

The Bharatha Matha Associations:

The secret Society Bharatha Matha Association is generally believed to have come into existence in or about January 1910. Neelakandan probably acting in accordance with directives from a high command either in Pondicherry or in Bengal was successful in establishing the first branch of Bharatha Matha Association in the Princely State of Travancore strategically close to Tenkasi the Western most taluk of Tirunelveli district. [332] Branches were soon established in Tenkasi and Thoothukudi.

Aurobindo Ghosh and V.V.S. Iyer:

Aurobindo Ghosh, an extremist revolutionary in Bengal left Bengal as he was wanted by the British in Alipur Bomb case and arrived at Pondicherry in 1910. In the same year V.V.S.Iyer also arrived Pondicherry in disguise. For Neelakandan, the arrival of Ghosh and Iyer in Pondicherry was a very important development. Ghosh in particular seems to have acted as charismatic influence in Neelakandan's political evolution. For

other young revolutionaries, V.V.S.Iyer's belief that "violence is the best method in the present state of the country....youngmen should be induced to violence" held greater appeal. V.V.S.Iyer was a terrorist revolutionary who believed that violence in the pursuit of freedom was no vice whereas Neelakandan was revolutionary nationalist who was opposed to terrorism.[333] Neelakanda Brahmachari's life was part of the history of revolutionary nationalist movement in India. He took efforts and enlisted revolutionary army of nearly 25000 men in Pathamadai, Poolam, Maravakurichi, Tenkasi, Ambasamudram, Thoothukudi and other places in the district. He established contacts with Poolam Periaswamy Thevar, Maravakurichi Pichandi Thevar, Ambasamudram Gomathi Sankara Dikshithar Thoothukudi Nilaya Nathan Reddiar, Adanoor Mapilaichami and others.[334] Neelakanda Brahmachari was probably the first, long before Gandhi, to attempt mass movement. The congress organisation was dominated by upper caste Hindus only.[335] It was Neelakanda Brahmachari who attempted to enlist the support of the people irrespective of their position in the society and wanted to give the national movement a mass base. Neelakandan's plans were pragmatic but failed due to historical circumstances which went against his calculations., An objective appraisal of Neelakanda Brahmachari's role in Indian National Movement particularly in revolutionary nationalism, he is rated as one of the foremost leaders of India.[336]

The efforts of the revolutionaries to do away with the whites in India starting with the Tirunelveli bureaucrats who made themselves obnoxious, crystallized on 10 April 1910 when they held their first meeting at Tenkasi at the residence of one Madattukadai Chidamparam Pillai where a new plan was evolved. Neelakandan explained that V.O.Chidambaram and Siva were punished for awakening the nationalist sentiments of the people by lectures and the same was the fate of the many other patriots of the country. The meeting was followed by the performance of 'puja' and taking of blood oath. There was Kali's picture which was sprinkled with red liquid made of *kumkumam* and water said to be the symbol of the blood of the Englishmen. An oath was then administered to the effect that the lives and property of the persons taking the oath were dedicated for the purpose of obtaining *Swaraj*, that the secrets of the society should not be divulged and that if any one did so, he would be killed. The participants drank the kunkumum water to symbolise the drinking of the blood the Englishmen. After reciting the 'mantra' and shouting 'Vande Mataram', the members present read the oath in turn, cut their thumbs with a knife in order to affix their thumb impressions in blood against their names. The oath takers were given new names to conceal their identity in case any correspondence about this society should fall into the hands of the authorities. Neelakanda Brahmachari, Krishna Iyer of

Kadayanallur, Chidambaram Pillai, Vande Mataram Subramania Iyer of Ottapidaram and K.V.Arumugam Pillai of Thoothukudi took the blood oath. The other young patriots associated with the secret society in the district were Jagannatha Iyer, Harihara Iyer, Pichumani Iyer (also called Venkatachala Iyer) and Vanchi Iyer.

Vanchi Iyer

Among those inspired by V.V.S.Iyer's open advocacy of terrorist violence was one Sankara Iyer of Shenkottai, otherwise known as Vanchi Iyer. His father Raghupathi Iyer was an employee of Shencottai Devasthanam. Vanchi started his career as a temple accountant and got appointed as forest guard in the Travancore Forest Department. He was enrolled as a member of the Bharatha Matha Association of Neelakanda Brahmachari in 1910. Influenced by Neelakandan and the revolutionary literature from Pondicherry, Vanchi became well acquainted with the character of a revolutionary long before he first met V.V.S. Iyer in December 1910. After a meeting with V.V.S.Iyer, Vanchi went on long leave initially for a period of a month, later extended by another two months. He re-joined duty in April 1911, finally leaving the Forest Department for good on May 15, 1911. During this five to six month period, Vanchi appears to have undergone some form of personal transformation, emerging at the end with a clear commitment to put family problems (including chronic indebtedness) aside and focus on what he described as 'the welfare of the nation which is in ruined circumstances'.

Assassination of Ashe

The idea of carrying out political assassination in Tamil Nadu had been in the air for several years. In September 1907, a Member of the Madras Mahajan Sabha had warned the CID that local extremists had planned to assassinate a District Magistrate within six months. After the imprisonment of the Swadeshi leaders in 1908 anonymous letters threatening the lives of the Governor and other Government officials became quite common place. The ill treatment of Swadeshi leaders in jail, the collapse of the Swadeshi Steam Navigation Company and finally the appointment of E.W.D. Ashe who used his iron hands against the Swadeshi leaders during 'Tinnevelly riots', had contributed to a widespread resentment.

The selection of Ashe, was reportedly due to the role he had played in the suppression of 'Tinnevelly riots' and in the subsequent closure of the Swadeshi Steam Navigation Company. However, on the face of it, Ashe was a less obvious candidate for assassination than was L.M.Wynch, the Tirunelveli District Collector who had conceived and executed the plan of removing the combative Swadeshi leader V.O.Chidambaram from the

political scene. Ashe had infact taken charge as Joint Magistrate only on March 3 1908, a few days before the events at Tirunelveli and Thoothukudi. 337

V.V.S.Iyer is generally believed to have masterminded the plot. He selected Vanchi to perform the deed. Vanchi accepted the assignment despite his burdensome domestic responsibilities and above all his wife had just given birth to a still born child. V.V.S.Iyer trained him in shooting. The ever alert CID recorded Vanchi's movements but failed to scotch the assassination plot. Meanwhile the conduct of Ashe seemed to be showing signs of improvement. He was now moving socially with the local population and seemed to be attempting to efface his earlier reputation. None of this impressed the people. Vanchinathan and his companion Sankara Iyer kept a constant watch on Ashe's movements. When an attempt to enter Ashe's house failed, Vanchi decided to carry out his assault in broad day light at a public place.

On June 17, 1911, Ashe along with his wife left Tirunelveli Bridge station by 9.35 a.m. train to catch the Boat- Mail train at Maniyachi junction. As they waited in the station Vanchi Iyer, dressed in green coat and white dhoti with the front portion of his head shaven and the hair at the back of his head tied into a knot, approached the first class compartment and pointed a pistol at Ashe who immediately took off his hat and flung it at Vanchi in a reflex action. It was too fragile a protection. After shooting, Vanchi ran into a latrine where he shot himself dead. Sankaran Iyer who had accompanied him to the station quietly left the scene.

Ashe was still breathing but medical aid could not be had immediately there. Only a railway apothecary came to do what he could. Ashe was placed in the train which was taken back to Tirunelveli much to the inconvenience of all the passengers bound for Madras. Ashe breathed last at his wife's arms when the train was passing Gangaikondan railway station about 15 km. off from Maniachi. His body was carried to his bungalow and that evening at seven it was laid to rest at the cemetry of English church at Palayamkottai.

The revolver taken from Vanchi was Browning automatic pistol whose magazine and breech were empty. Vanchinathan had obviously charged it with only two cartridges - one to shoot Ashe and the other, for himself. The district medical officer removed from the muscle of his neck the bullet that killed him. His body was examined in the presence of the Panchayatdars. In one of his coat pockets was a purse made in France, bearing picture of Queen Victoria with the image of British Royal Arms above. The purse contained a second class ticket from Tirunelveli bridge to Maniachi for 17 June 1911, issued for the very train in which Ashes travelled. Also inside the pocket was an undated signed letter which referred

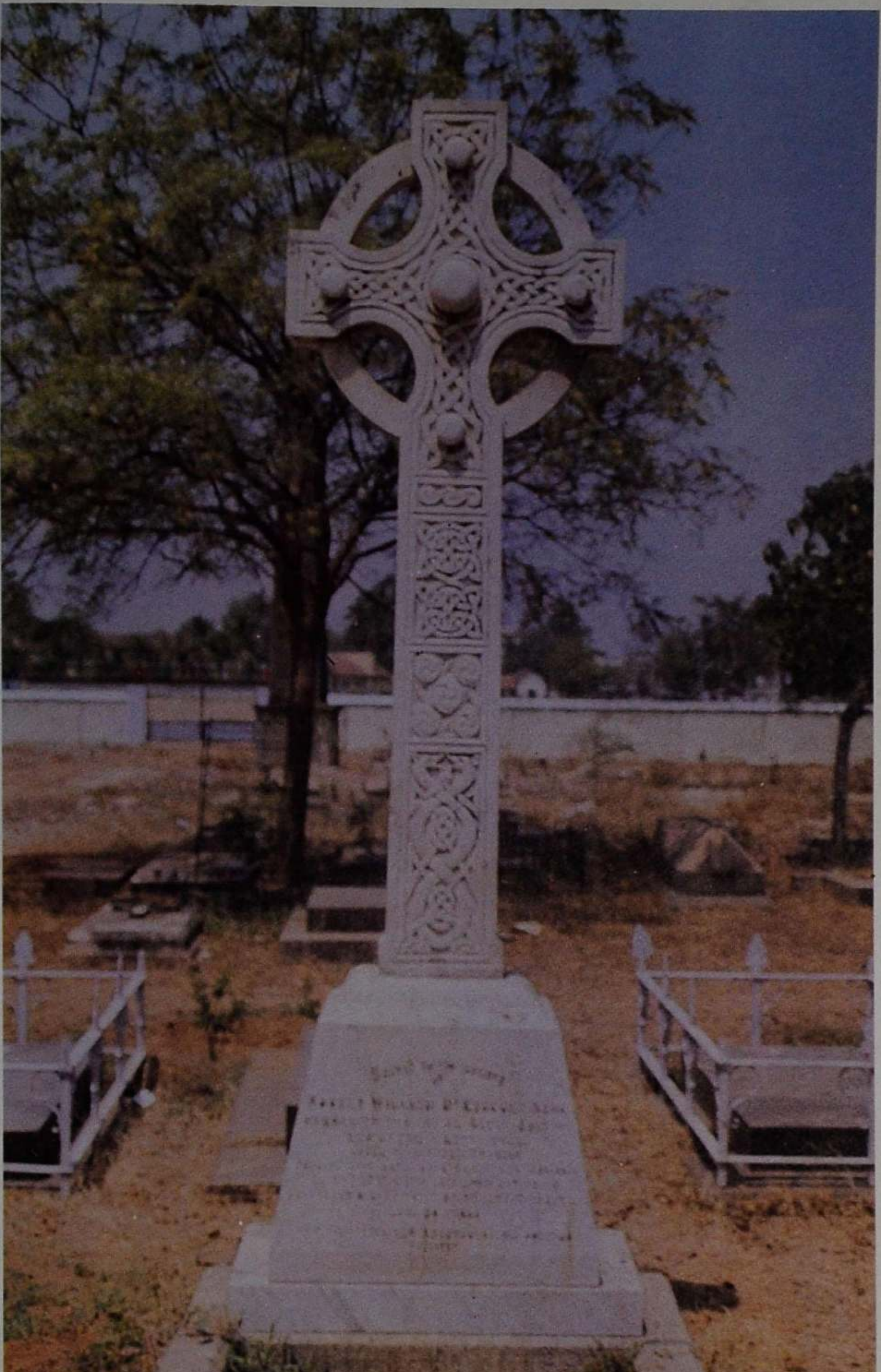
to the impending royal visit to India, stated, "Three thousand of us Madrasees have banded ourselves together for the purpose of killing him (George-V) as soon as he sets his foot in our country. In order to make this known, I, the least among them have this day done this deed. This is the duty which every one in Hindustan should perform".

The body of Vanchi Iyer was conveyed to Tirunelveli Bridge in a closed truck which was under the custody of the Superintendent of Police. An identity parade was held to enable the public to see the murderer and photographs of the corpse and finger impressions were taken before the corpse was sent for post-mortem. Three days later a hotel keeper Ramalinga Iyer by name, of Viraraghavapuram, Tirunelveli recognised the body as that of Vanchi Iyer, son of one Raghupathi Iyer. On being closely examined, Raghupathi Iyer said that he and his son were not on talking terms for quiet some time then.

Almost the entire Indian press, both European and native was unanimous in condemning the act as heinous dastardly, tarnishing the fair name of the Presidency and characterising Vanchi Iyer as the most odious of traitors. The Hindu characterised the killing as the "most wanton and unprovoked outrage" and called upon the people to see that "anarchical crime" did not gain a foothold in the Presidency. One school of thought was firm in its conviction that Ashe's murder was one of a series organised and directed outside the Madras Presidency for the express purpose of destroying the Raj.[336]

Any murder, whatever the provocation for its commitment is unpardonable. There can be no second opinion about it. However, the fact that the perpetrator of the crime cared least for his own life, spoke volumes of the deep rooted hatred against the ruling race to which the victim belonged. Many of the newspapers also ` sympathised with Ashe eulogising his role as Collector of Tirunelveli. Of his conduct as sub-collector and joint-Magistrate of Thoothukkudi, it is unnecessary to speak. In killing Ashe, the assassin had wreaked his vengeance for the nefarious deeds of Ashe as Sub-Collector of Thoothukkudi. Though Ashe and Wynch acted throughout the proceedings in concert, the cruelties perpetrated by the former were more. A patient and dispassionate review of the whole plot, culminating in the murder of Ashe will reveal that it was his patriotic zeal that hastened Vanchi Iyer into the act.

Vanchi Iyer's suicide had put the district administration in a quandary. A furious police arrested all against whom any connection with the propaganda in Tirunelveli could be traced. Armed with the information in the letter of Vanchi different police force went to Tenkasi, Shencottai, Thoothukkudi and Ottapidaram to make searches. The police traced certain conspirators and succeeded in making them to turn approvers. They were K.V.Arumugam Pillai and D.Somasundaram Pillai of Thoothukkudi and



Ashe's Cemetery, Palayamkottai

Ramasamy Iyer and Sundaram Iyer of Sundara Pandiyapuram. They became prosecution witness and helped the government. From the statement of the witnesses and the accused it was establisbed that Vanchi Iyer came to Tirunelveli on the night of 13, June 1911 and stayed in the Hundi Shop 'TSSV' in Tirunelveli until the morning of 17, June when he left along with Sankara Iyer who joined him the previous day. Sankara Iyer was arrested on 27 June 1911. The two sons of the Maniachi Station Master were the other two witnesses in the case.

In this Ashe Murder case which became popular as the Tinnevelly Conspiracy case, fourteen persons were charged with having entered into a conspiracy to wage war against the British and in pursuance of that, aided and abetted the murder of Ashe by Vanchi Iyer on 17 June 1911.

The fourteen accused were:

Sl.No.	*Name*	*Caste*	*Age*	*Profession*
1.	Neelakanda Bramachari	Brahmin	21	Journalist
2.	Sankara Krishna Iyer	Brahmin	22	Cultivator
3.	Madathukadai Chidambaram Pillai	Vellala	24	Grocer
4.	Muthukumarasamy Pillai	Vellala	45	Pot-seller
5.	Subbiah Pillai	Vellala	43	Vakil's clerk
6.	Jagannatha Iyengar	Brahmin	25	Cook
7.	Harihara Iyer	Brahmin	21	Merchant
8.	Bapa Pillai (alias) Ramasamy Pillai	Vellala	24	Cultivator
9.	V.Desikachari	Brahmin	30	Merchant
10.	Vembu Iyer (alias) Mahadeva Iyer	Brahmin	23	Cook
11.	Saradi Arunachalam	Vellala	20	Cultivator
12	Alagappa Pillai	Vellala	18	Cultivator
13.	Vandemataram Subramania Iyer	Brahmin	26	School Master
14	Pichumani Iyer (alias) Venkatachala Iyer	Brahmin	26	Cook

All these men with the exception of Muthukumarasamy Pillai and Subbiah Pillai were in their twenties. The youngest being the first accused, namely Neelakanda Brahmachari, who was just 21. All were charged under Sections 121 A, 302, 109 and 111 of the IPC. The case was set up by A.M.G. Tampae, Sub-Divisional First Class Magistrate of Tirunelveli for trial by the High Court under the provisions of the part-I of the Indian Criminal Law Amendment Act, 1908. The trial dragged on for a tediously long period. It began before a Special Tribunal comprised the Chief Justice Charles Arnold White, Justice Ayling and Justice Sankaran Nair. C.F. Napier, Public Prosecutor assisted by T.Richard and A.Sundara Sastriar appeared on behalf of the Crown. The advocates who defended the accused were, J.C. Adam, Prakasam, M.D. Devadoss, J.L.Rosario, E.S. Chidambaram Pillai, B.Narasimha Rao, T.M.Krishnaswamy, N.K.Ramasamy, L.A.Govinda Raghava Iyer, L.S.Veeraraghava Iyer, M.G.Kuppusamy Iyer, S.T.Srinivasagopalachariar, S.Muthia Mudaliyar and Ryru Nambiar.

The fourteen accused alleged to have formed a conspiracy with seven others were Vanchi Iyer the assassin who had committed suicide' Dharmaraja Iyer who committed suicide by corrosive sublimate after his house was searched before his arrest, Arumugam, Somasundaram, Sundaram Iyer and Ramasamy Iyer, who had become approvers and Madasamy Pillai who had absconded. It must be stated that one Venkatesa Iyer, a pleader of Punalur who had merely attended one of the meetings also committed suicide when he was called by the Superintendent of Police, Travancore to appear before him on a certain day. On that morning, he was found with gashes in his throat and chest which were self-inflicted. His dying declaration was that he attended the meeting only as some other witnesses had done and that he too should be examined only as a witness. Madasamy was reported to have been seen somewhere in the neighbourhood of Tiruchendur on 26 June. He was in Pondicherry but shifted his asylum frequently so as to evade the police and detectives. Bold, sagacious, interpid and a jack of all trades Madasamy often dodged the CIDs by roaming about in disguise. Since. he was the most prominent and daring of the revolutionaries and the police was hell-bent on nabbing him, it proved a tough task for his friends in Pondicherry to safeguard him even during the short period of his exile there. The attempt of Bharathidasan to disguise him as a Tamil Pandit named Mohammed and put him on board a ship bound for Saigon having been foiled he was made to stay in the house of Amma Kannu the maid servant of at the house of Subramaniya Bharathi. When the CID agent G.S.Abdul Kareem having scented this approached the house, both Amma Kannu and Bharathidasan came out sobbing bitterly to tell him that a relative of Amma Kannu was afflicted with small pox. That was enough to scare away the secret police. This ensured Madasamy's safety for the time being and also gave respite for

his friends to plan the next move. What exactly happened later is not known. A rumour was afloated that he had fled to Germany (via) Singapore. All attempts of the police to secure Madasamy ended in failure and his personal belongings were confiscated by the government.[338]

The judgement on the case was delivered on 15 February 1912. There were three counts of indictment. The first one was against all the accused under Section 121-A of the IPC with the charge of conspiring to wage a war against the King Emperor, the second one was also against all the accused under Sections 303, 109 and 111 with the charge of abetment of murder and the third was against Sankara Krishna Iyer under Section 114 with the charge of abetting the murder of Ashe by Vanchi Iyer. On the second count the Special Bench of three Judges acquitted all the accused. They reached a consensus in holding that there was nothing to prove that the assassination of Ashe was the indirect result of conspiracy. On the first charge of conspiring to wage a war against the King Emperor, there was no agreement among the three judges. Justices White and Ayling concluded that the charge was substantiated against nine out of fourteen tried but not against the rest. Justice Sankaran Nair opined that the Crown had failed to establish the case not only against the five persons acquitted by the majority of the Bench but also against the five other accused persons. He delivered a separate judgement convicting only four people. All the three judges were unanimous in holding four persons, Neelakanda Brahmachari, Sankara Krishnan Iyer, Jaganatha Iyengar and Pichumani Iyer guilty. However, judgement was pronounced in accordance with the opinion of the majority and sentences passed accordingly. Neelakanda Brahmachari, the first accused was sentenced to seven years rigorous imprisonment, which indeed was excessively severe. At the time of the murder of Ashe, Neelakandan was in Benares and he was arrested in Calcutta where he had gone to surrender to the police. He had fallen out with Vanchi Iyer and left South India in February 1911. The relationship between him and Vanchi did not appear to have improved as was evidenced by Neelakanda's deposition during the trial. In denying any connection with the assassination of Ashe, he said that though the members of the association were planning for a violent revolution and were moving about under pseudonyms to escape the police, it was never their intention to kill any individuals. Most unfortunately Vanchi Iyer, by his indiscreet killing of Ashe, had not only destroyed himself but also spoiled their entire plan to bring forth a major revolution. Neelakanda was more inclined to blame V.V.S. Iyer for the shooting outrage. Exploiting the passion and rage of a young dare devil like Vanchi Iyer, V.V.S.Iyer instigated him to kill Ashe by imparting training in revolver shooting to carry out the deed, he deposed. The second accused Sankara Krishna Iyer, brother-in-law of Vanchi was awarded four years rigorous imprisonment; the seventh accused

Harihara Iyer three years; the third accused Chidambaram Pillai two years and the remaining five, the fourth, fifth, sixth, eighth and fourteenth accused - Muthukumarasamy Pillai, Subbiah Pillai, Jagannatha Iyengar, Babu Pillai and Pichumani Iyer, one year rigorous imprisonment each.

In memory of Vanchinathan, the Government of India named the Maniyachi Railway Junction as the Vanchi-Maniyachi.

Reaction of V.O.Chidambaram

V.O.Chidambaram and Siva were in Jail when Ashe was murdered. When V.O.C. then in Cannonore jail, was told of the murder of Ashe by the Junior Sub-Assistant Surgeon of the jail at the midnight on 12 June, 1911, he seemed to have told the bearer of the news. "Good findings, May God bless you". Obviously,this was his immediate reaction, born out of the untold sufferings, he had had on account of Ashe. But, in a subsequent letter to C.Vijayaraghavachariar, V.O.Chidambaram had expressed grief over such cruel acts, adding that their movement was only against the British rule and that by terminating the lives of a few British bureaucrats they could not bring about the downfall of the British Empire. He requested the veteran leader to tell those who believed in human relation, not to cause injury to the life of any British authority, however wicked and cruel he might be. [339]

Gandhian Phase

After the entry of Mahatma Gandhi into National Movement, non-violence became the watchword of the Congress. In Tamilnadu leaders like Kasturi Ranga Iyengar, Rajaji, Pattabhi Seetha Ramiah, Salem Vijaya Raghavachariar, T.S.S. Rajam, Sathiyamoorthy, rose to prominence. V.O.Chidambaram, Subramania Siva, V.V.S.Iyer, Bharathiar and Varadarajulu Naidu continued to be inspiring leaders of the Freedom movement.

V.V.S, Iyer and Cheramadevi Gurukulam:

There is little evidence to suggest how many Gandhian activists were in Tamil Nadu in the early 1920s. Not more than 36 lawyers suspended practice in 1920-1922 responding to Gandhiji's call for civil disobedience movement. A few activists like V.V.S. Iyer helped establish a small National School. V.V.S.Iyer started a Gurukulam (National school) in Kallidaikurichi and later shifted it to Cheramadevi both in Tirunelveli district.

By 1924 Varadarajulu Naidu was the President of the Tamil Nadu Congress Committee. He discovered that the Brahmin and non-Brahmin pupils in V.V.S.Iyer's Gurukulam (National school) were having separate dining halls. The Congress President regarded this segregation as contrary

to Congress aims of removing untouchability and since the Tamil Nadu Congress Committee helped to finance the school, he called for a change in its policy. E.V.Ramasamy Naicker, who later became "Periyar" of Tamilnadu preaching rationalism, and T.V.Kalyanasundara Mudaliyar, then active leaders of the Congress supported Varadarajulu in the Gurukulam affair. The resignation of V.V.S.Iyer at the instance of Gandhiji did not diffuse the situation. The Tamil Nadu Congress Committee, therefore, convened a conference in November 1925 at Kancheepuram to discuss the Cheramadevi issue. Rajaji and T.S.S. Rajan held the view that the TNCC should not interfere in the running of the school, the authorities could be requested to allow inter-caste dining. E.V.Ramasamy (Naicker) and his supporters came out of the Congress Committee protesting against the Congress stand in the Gurukulam affair and started Self-Respect Movement the genesis of the birth of Dravidian political parties in Tamilnadu.

Break of Neil Statue

Gen.Neil was the British Official who suppressed the Sepoy Mutiny of 1857, which is described as the First War of Independence. A statue of Gen.Neil was erected in Madras city in 1860. The Congress volunteers saw in him the symbol of British imperialism and so they decided tp break it. Among those volunteers there were some from Tirunelveli also. [340]

Strike in Papanasam Mills

S.R.Varadarajulu Naidu, a Congress labour leader organised a strike of the workers of the Harvey Mills in Papanasam on 4 February 1930. The strike continued upto 4 April 1930. The contemporary Report of N.Viswanatha Rao, the acting district magistrate, Tirunelveli dated 6 January 1931 says that the reason for the strike was economic and not political. It further says that the strike was a matter of convenience for the administration of the mill as there was a slump in the market owing to great Depression of 1929 and they were quiet glad to close down the factory and save the wages of the men for the time being.[341]

Civil Disobedience Moverment

In the Lahore Congress Session of 1929, Gandhiji called to boycott the British administration including the Legislative Councils and educational institution. His call was received with a mixed feelings in Tamil Nadu. Most of the Congress leaders in Tamil Nadu belonged to moderate wing held that the boycott programme would result in a national disaster. [342]

After Gandhiji had started his Dandi Salt March, the Civil Disobedience Movement gained momentum in the district. The district magistrate Viswanatha Rao convened a meeting of the local people who were loyal to the administration on 27 June 1930 as the Congress Committee was

engaged in recruiting volunteers and collecting fund for the participation in the Vedaranyam Salt March proposed to be conducted by Rajaji from Tiruchirappalli. In the meeting the magistrate threatened to take strong measures against the Congress workers and others who joined them in the Civil Disobedience Movement in the district. He sought the co-operation of the public in isolating the Congress men. On 4 July 1930 Palaniyandi Mudaliyar, the President of the District Congress Committee resigned and J.P.Rodrigues was elected in his place. The district administration began to give all sorts of trouble to the leaders of the Freedom Movement. The office of the District Congress Committee, the Khaddar depot and the Arunodhayam press were searched. On 5 July the houses of J.P.Rodrigues, P.Kandasamy Pillai and A Masilamani Pillai at Thoothukudi were arrested. The police promulgated prohibitory order under Section 144 of Cr.P.C. and a meeting announced to be convenened in the evening of 5 July 1930 was forestalled. In the next day, people gathered in front of the police station in protest against the arrest of their leaders were lathicharged and dispersed. Rodrigues, Kandasamy and five others were convicted as they did not defend their cases. A. Masilamani alone defended his case and the trial prolonged.

In Tirunelveli town eleven volunteers were arrested for their speeches and songs against the British. Perumal Raju, a disciple of Gandhiji wanted to send telegram to Gandhiji but it was not accepted by the postasl clerk. Enraged by this Perumal Raju assaulted, Marris a Sergeant who came to the rescue of the postal clerk at the Tirunelveli Junction Railway station on the morning of 26 June 1930. It was the time of the Car festival of the God of Nellaiyappar temple. The Congress volunteers tried to hoist the national flag atop the temple car and also the portrait of Mahathma Gandhi in the Car. When the temple trustees objected to it, the people influenced by the Congress volunteers stopped dragging the Car. However, the car festival was conducted with the help of the police.

In August 1930, there were picketings in Ramanathapuram and Madurai districts against the auction of toddy shops. Anticipating the picketing programmes in Tirunelveli district, the administration arrested the top leaders in the district as a precautionary measure. Hariharaputhra Sarma, who was planning to organise hartal was silenced by clamping the Section 144 Cr. P.C. in the town and by arresting ten leaders. K.P. Yegneswara Sarma, who visited various places in the district advocating picketing was arrested in Thoothukudi on 15 August and sentenced on the same day for making objectionable speeches. But, this did not stop the hartal being observed in Tirunelveli on 10 August. About the hartal, the District Magistrate's Report to Government says, "..The activities of the picketers in August, the unusual disorderliness evident in the hartal of

10 August at Tinnevelly and the disorderly meetings at Thoothukkudi demonstrated that the rowdy elements in the Congress fold were getting upper hand owing to defection or removal by arrests of the sincere and more responsible Congress workers".

Hartals

On 25 August, the district administration promulgated orders under Section 144 Cr. P.C. prohibiting all Congress demonstrations months. Consequently, the District Congress office was raided . These measures never stopped the Congress workers from calling for hartals. Many hartals were observed in the course of Civil Disobedience Movement and hand bills and notices were issued. Then the hartals were a regular feature in Tirunelveli. They were observed when the prominent leaders were arrested or on the excesses of the district administration. The important hartals observed were on 2 May 1931, for the arrest of C.Rajagopalachariar (Rajaji), on 7 May, for the arrest of Gandhiji, on 3,4 and 5 July for the arrest of Motilal Nehru, on 10 August for the conviction of Pandidt Malavaiya and Patel, on 25 August for the arrest of Abdul Kalam Azad on 24 October and 17 November for the arrest of Jawaharlal Nehru, on 12 December for the arrest of Vallabhai Patel.

A.P.C.Virabhahu:

On November 17, 1930, the Tamil Nadu Congress constituted Council of Action, under the direction of S.Sathiyamoorthy, A.P.C. Virabhahu Pillai, Secretary of the local Congress Committee was appointed the organiser of the district. About 1500 printed Tamil hand bills carrying the resolutions of 'Council of Action' were received for distribution in Tirunelveli. A.P.C. Virabhahu and four of his followers were arrested when they started distributing the hand bills . The hand bills were also seized.

Meetings

In the course of Civil Disobedience Movement night meetings at street corners were regular features. Guest speakers were invited from the neighbouring districts for delivering speeches. N.Somayajulu of Tirunelveli, Varadaraja Iyengar and Konda of Madurai, Theagaraja Siva of Thirumangalam, Muthusamy Asari of Viruthunagar, and Muthusamy Thevar of Rajapalayam were the leaders who spoke in the meetings in the various places of Tirunelveli district. Muthusamy Thevar of Rajapalayam and Somayajulu of Tirunelveli were arrested and sentenced for their patriotic speeches in July 1930.

The district administration with the help of the loyalists arranged public meetings in Tenkasi (23 June), Tirunelveli (27 June), Ambasamudram and Sankarankoil (25 June), Gangaikondan (16 November) and a few other

places to canvass support for the government's action against the volunteers of the Civil Disobedience Movement. The police who used their iron hands against the freedom fighters were praised in a Darbar meeting organised and addressed by the district magistrate in Tirunelveli on 3 December 1930.

Local Press

Varanthara Varthamanam a local weekly was intimidated and threatened by the police not to publish any article supportling the Congress or its movements. The *Arunothadyam Press* leased out to Rodrigues, was reprimanded not to print Congress propaganda literature any longer. *Sitaram Press* in Tirunelveli which printed hand bills notices requesting people to buy Khadi dresses and to boycott foreign goods for Deepavali was also warned of dire consequences.

In June 1931, Rajagopalachari visited the main picketing centres in the district to satisfy himself that intimidation was not being used by the picketers. By the end of 1931 the intensity of the picketing was decreasing but it had served to keep alive the spirit of conflicts between the congress and the government.[343]

Quit India Movement (1942)

The Indian National Congress passed the historical resolution that the British should quit this country in its Wardha Conference held on 6 July 1942. By that time the Tamil Nadu Congress was under the leadership of K.Kamaraj. He took all out effort to propagate the Quit India Movement a success in Tamil Nadu.

The people responding to the call of the Congress to participate in the Quit India Movement, registered their participation by cutting the telegraph wires, removing the fish plates of rails and organising hartals and public meetings. The College students of Tirunelveli town organised strikes and joined the movement. Thoothukudi, Tiruchendur and Kulasekarappattinam in the erstwhile Tirunelveli district played crucial role in the movement. An untowered event that took place in course of the movement, the murder of an Assistant Salt Inspector, Loane, at Kulasekarappattinam. The chief events in the district were the fasting, procession and public meeting of Tirunelveli college students on 10, 11 and 12 August 1942, closing of shops in Tirunelveli and a public meeting in Sankarankoil on 13, August, arrest of Krishnasami Chetti at Sankarankoil for his picketing at the gates of Board School on 17 August, removing of fish plates of railway line in Cheramadevi on 18 and 19 August, cutting of telegraph wire in Kilapavoor (Tenkasi Taluk) on 20 August, and in Sankarankoil on 24 August, obserbvance of complete hartal in Tirunelveli and Palayamkottai on 30 August, one day stay in strike ofTirunelveli Hindu College students

demanding the closure of College and postponement of examination in view of the movement on 4 September, cutting off telegrpah wires in Kadayanallur on 28 September, procession of Hindu College students on 2 October, a hartal in Tirunelveli on 3 October, picketing the high school in Kadayanallur on 5 October and removing of fish plates in the railway line near Tirunelveli junction on 8 November. [344] The Congress leaders who were launching the movement in the district were Shanmuga Sundara Tevar, S. Ramasamy Pillai, S.T.Adityan, Valarian Fernandez, C.R. Saradambal, two women, . M.L.A.s Tmt. Lakshmi Ammal and Tmt. Jabanai Mayilsamy.

The Quit India Movement remained active in Tamil Nadu only for a few months roughly from August to December 1942 and there after it gradually died down. [345]

After undergoing many trials and tribulations, the dawn of freedom was greeted in the district with great re-joicing.

Freedom Fighters

The soil of the present Tirunelveli district is noted for its nationalistic fervour. It is a herculean task to list the names of all those who struggled and sacrificed in the district for liberating the country from the foreign yoke. From 1900 to 1947, about 540 freedom fighters belonging to the present Tirunelveli district seem to have fought for the cause of Independence.

National leaders like V.O.Chidambaram Pillai, Subramania Siva, Mahakavi Bharathi, V.V.S. Iyer, and Neelakanda Brahmachari, though not born in the district were closely associated with Swedeshi and extremist movements in the district. The district level leaders hailing from various places of the district include Vanchinathan, S.T. Adhithan (Palayamkottai), Chockalingam (Tenkasi), Gomathi Sankara Dikshithar (Kallidaikurichi), Sadhu Krishnasamy (Ambasamudram)., T.C.Sankara Iyer (Kallidaikurichi) Kandasamy (Sankarankoil), Lakshmi Sankara Iyer and her husband Sankara Iyer (Kallidaikurichi), Marthandam Veerabhahu (Nanguneri), Meenakshi Sundaram (Sankaran Koil), V.S. Mudaliar (Tirunelveli) S.T. Mudaliar (Sankarankoil), Lingana Naicker (Sankaran Koil), N.V. Perumalsamy (Sankarankoil) Pichaia pillai (Tirunelveli) Sangu Subramaniam (Tirunelveli), N.Somayajulu (Palayamkottai), V.Ramanatha Thevar (Sivagiri), Yegneswara Sarma (Kallidai Kurichi) and a host of others. Short biographical sketches of the leaders from the district are given in the *Appendix*[346]. The intensity of the National Movement witnessed in the district were Swadeshi Movement, Civil Disobedience Movement and Quit India Movement. The freedom fighters hailed from the various places of the district and mostly from Tirunelveli, Palayamkottai, Kallidaikurichi, Sankarankoil, Sivagiri, Tenkasi, Ambasamudram, Valliyur, Kadayam and Nanguneri.

Indian National Army

When Subash Chandra Bose recruited Indian National Army in Malaysia, about 100 people who had been to Malaysia from the district for employment opportunities enrolled themselves in the army out of patriotism. Most of them belong to Nanguneri and Radhapuram taluks. After the second world war and the attainment of Indian Independence they returned to their homeland.[347]

The Government of India and Tamil Nadu have honoured the serving freedom fighters by presenting Tamirapattayam, pensions, First class Train and bus pass facilities to them. Members of the deceased freedom fighters are given family pension.

Representation in the country's Legislature (1937-1947)

The Madras Presidency was governed by the Governor in Council. The members of the council were appointed from among the Europeans. For the first time, the Council Act of 1861, passed by the British Parliament had provisions for the appointment of non-official Indians in the Council of Madras Government. Subsequent Council Acts, 1892 and 1909 had expanded the Membership in the Council. By 1909 Council Act, the Madras Legislature consisted of 21 official members and 26 non-official members. Out of the non-official members, 21 were elected. Out of the 21 elected members, two were elected by Muslims, two by Zamindars, three by landlords, one by Corporation of Madras, one by Madras Chamber of Commerce, one by the Madras Traders' Association and one by the planting community. The rest of the nine were elected by the Municipal Councils, District Boards and Taluk Boards. The Government of India Act of 1919, had enlarged the Madras Legislature. While 70 per cent of the members of Legislative Council were elected, 30 per cent were nominated. The electorate was restricted and there was no universal adult sufferage. The duration of the Council became three years and powers of legislators were improved. The Government of India Act of 1935 further improved the Madras Legislature. The Act introduced two Houses in the Presidency (i.e.) Legislative Assembly and Legislative Council. The maximum number of Members provided by the Act for the Madras Legislative Assembly and Council were -215 and 56 respectively. In the first Madras Legislative Assembly constituted as per the provisions of the Government of India Act, 1935, the composite Tirunelveli district was represented by T.S. Chockalingam Pillai (Tirunelveli General electorate), Yegneswara Sarma (Tirunelveli and Palayamkottai towns General electorate), J.P. Roche Victoria (Indian Christian elector Tirunelveli) and V.L.D. Sheik Manjur

Tharakanar (Muslim electorate Tirunelveli Rural). In the 1946 election, the representatives from the district were P.S. Sankara Subramaniya Mudaliar from the General electorate consisiting of Tirunelveli and Palayamkottai towns, Mohammed Hussain Sahib from Muslim electorate (Rural) and V.Lakshmi Ammal, General electorate Cheramadevi. [348]

Non-Brahmin Movement

In the beginning of this Century, there developed a bitter feeling among the Dravidians against the Brahmins partly because of the ordeals that they suffered and partly because of the new cultural influence. They resented the exploitation to which they were subjected to in the name of God and rulers. [349] Though the Brahmin constituted only a little more than three per cent of the population it was felt that they provided over a vast system of mutual hatred and untouchability, led an easy going life in the temples, promoted Bharatanatya and Kirtanas at the expense of the folk dances and songs of the Dravidian and gained almost a complete monopoly of the position open to the Tamils in the administration. [350] By 1912, they held the 55 per cent of the posts of district Munsiffs and 80 per cent of the posts of sub-judges. Though the English were considered as the rulers, in reality, the Brahmins ruled over the Tamils. To the Dravidians, the Congress Party appeared a taboo, for it was dominated by the Brahmins whom they hated. Therefore, a new party appeared essential.

Accordingly in 1916, P.Theagaraja Chetty, an influential member of Madras Corporation floated the South Indian Liberal Federation. Raja of Panagal, K.V.Reddy, C.Natesa Mudaliyar and Raja of Boppili were founder members of this party. Two other associations called Madras Dravidian Association and South Indian People's Association also came into existence. The three associations combined themselves into the Justice Party, called after the newspaper 'Justice' edited and published by the South Indian Liberal Federation. The manifesto of the party included the improvement of educational, social, economic, political material and moral conditions of the non-Brahmins. The party asked for the communal electorate and communal representation in public services. When the Government of India Act, 1919, provided for dyarchy in provinces and as a result, a limited responsible Government was introduced in the Madras Presidency. The Congress Party refused to contest the election criticising the 1919 Reforms but, the Justice party welcomed the Reforms, contested the elections held in 1920 and captured power and formed the ministry. A. Subbarayalu Reddiar became the Chief Minister of Madras Presidency. When the second election according to the Act of 1919 was nearing in 1923, a new group 'Swarajists' had emerged among the Congressmen. The Swarajist's strongly advocated for contesting the election of 1923. In the elections held in various provinces in 1923, Swarajists gained a

significant success, securing 45 out of 104 elective seats in the Central Legislative Assembly. Satyamoorthy was the Swarajist leader in Madras Presidency. The Swarajists contested only eleven seats and won all of them. The Justice Party was returned in the election with a reduced majority of 44 members. However, the Raja of Panagal of Justice Party formed ministry in Madras Presidency with himself as the Premier. [351] The party lost the support of the Adi Dravidars and the Muslims. In the election of 1926, a divided Justice Party faced the opposition of a united Swarajists. Though the Swarajists emerged as the largest single group in the 1926 election, it refused to accept office . As the swarajists did not want to support the Justice Party, they favoured Dr.Subbarayan, an independent to form ministry. In the 1930 election, the Congress and the Swarajists in consonance with a decision taken in Bombay refused to contest. This ensured an easy victory for the justicites. While the Congress launched the Civil Disobedience Movement, the Justice Party formed ministry with Munisamy Naidu as the leader. In 1932, the Raja of Bobbili replaced him as the Prime Minister of the Presidency. In the 1934 polls also the Justice Party faced a defeat but fortune favoured them once again. Under the pretext of introducing a new package of reforms, the Justice Ministry was allowed to continue till the Act of 1935 was enforced . Raja of Bobbili formed his second ministry which continued in power until the election of 1937.

When the Justice party was in power for 13 years, it brought about certain reforms to uplift the depressed classes and the non-Brahmins. The government took over the appointment of District Munsiffs from the control of High Court, as most of them were Brahmins. The order reserving appointments in local bodies, educational institutions, the constitution of Staff Selection Board (later Public Service Commission 1929) granting of voting rights to women on the same basis as was given to men, the passing of the Hindu Religious and Endowment Act and the Madras State Aid to Industries Act, abolition of Devadasi system, encouragement to indigenous system of medicine, provision of scholarship and mid-day meals were the contribution of the Justice Ministry for the welfare of the backward and the depressed classes.

The Government of India Act, 1935, provided for provincial autonomy and the electoral victory meant the assumption of a major responsibility in the administration of province. K.V. Reddi Naidu led the Justice Party and C.Rajagopalachari led the Congress in Tamil Nadu. The People's Party and the Muslim League were the new parties to enter into the election. In the election held in 1937, the Congress captured 152 out of 215 seats in the Legislative Assembly and 26 out of 46 seats in the Legislative Council. However, the party declined to form the Ministry as it was dissatisfied with the British refusal to guarantee against day-to-day interference in the admin

istration. Hence, K.V.Reddi Naidu formed the interim government. As the British Government gave the needed assurance, the Congress formed Ministry under C.Rajagopalachariar, T.S.Chokkalingam Pillai representing Tirunelveli (Rural) General) constituency Yegneswara Sarma representing Tirunelveli and Palayamkottai town (General) Constituency, J.C.S. Roche Victoria representing Christians constituency-Tirunelveli and Tmt.Jebamony Masilamani representing the constituencies of Tirunelveli, Thoothukudi and Palayamkottai towns -women -Indian Christians, were the Members of Legislative Assembly elected in 1937 Election from the district.

After its electoral defeat in 1937, the Justice party crumbled and went out of existence. In 1939, when the second World War broke out the British Parliament involved India in the war without consulting the Indian leaders. In protest, all the Congress Governments in provinces resigned. In Madras, the Governor took over the administration in 1939. In 1946, the next Congress Ministry was formed with T.Prakasam as the Chief Minister after the 1946 election. In between 1946 and the first general election after Independence in 1952, O.P. Ramasamy Reddiar (1947-1949) and P.S.Kumarasamy Raja (1949-1952) were the Chief Ministers of the State.

Self Respect Movement

As the Justice Party began to decline there emerged within its ranks of the most dynamic and colourful political leaders south India has ever produced.,[352] E.V.Ramasamy, popularly known as Periyar (man of wisdom) of Erode who started his political career as an active Congress man came out of it on the issue of caste dis crimination in the dining hall of the National School run by V.V.S.Iyer with the Congress aid in Cheramadevi and began to preach the ideals of the self-respect. He waged a crusade against casteism, superstition, the Brahmin dominance in the public offices, and blasted the Brahmin priesthood and Hindu Mythology. He denounced child marriage and advocated widow re-marriage. His preachings created an awakening among the non-Brahmins, especially the Nadar. He asked the people to perform self-respect marriages without engaging Brahmin priests. The Nadars of the district were the first to adopt self-respect marriage.

In 1937, when C.Rajagobalachariar was the Premier of the Madras Government, he introduced Hindi as a compulsory subject in Tamil Nadu. Taking it as an affront to Tamil culture and its rich literary tradition, E.V.R. Periyar led the protest. He arranged a black flags demonstration in the first phase of anti-Hindi campaign. The agitation against the imposition of Hindi brought E.V.Ramasamy to the forefront of Tamil Nadu politics . Tirunelveli district took part in the agitation. Meetings were conducted in Sathankulam, Thoothukudi and other places condemning the imposition of Hindi. V.Gnanamuthu Nadar of Sathankulam, W.P.A. Soundara Pandian

of Pattiveeranpatti, a popular self-respect leader, A.M.S. Annamalai Nadar of Thoothukudi, R.K. Perumal Nadar, M.,Vaikundam and P.V.Ponnusamy Nadar were the leaders in the south who took part in the Hindi agitation in 1939. The agitation which brought the death of Thalamuthu and Natarajan, two volunteers, in police firing forced the Government to change Hindi from a compulsory to an optional subject in schools.[353] E.V.Ramasamy and other leaders were put behind the bar for their anti-Hindi agitation. While in prison, E.V.Ramasamy was made the President of the Justice Party. In 1944, the Justice Party was re-organised as 'Dravida Kazhagam' at its Salem Conference. Then onwards it took on the character of a highly militant mass organisation. The Dravidar Kazhagam could no longer be considered a handmaid of the British administration as was the Justice Party from its very inception.[355]

The Dravidar Kazhagam through its organisational units in every district and taluk in Tamil Nadu took the message of Tamil nationality to the masses. Through plays presented in every nook and corner of the village through its voluminous literature and through inflamatory speeches, the movement was able to create a new awareness and mobilised the lower castes of non-Brahmin group for a political purpose..

The Dravida Munnetra Kazhagam

C.N.Annadurai (1909-1969) was the founder president of the party. He joined the Justice Party in 1935 and took active part in the anti-Hindi agitation of 1938. When the Dravidar Kazhagam . was founded, he became one of the lieutenants of E.V.Ramasamy. His vast knowledge in literature and his gifted tongue earned him popularity among the Youth of Tamil Nadu. Due to certain difference of opinion, C.N.Annadurai walked out of the D.K. Conference held in 1948. E.V.Ramasamy's popularity suffered a disastrous blow in 1949 when at the age of 72 he married a 28 year old woman who had been an active member of the party. On the pretext that the marriage was contrary to the avowed social objectives of the Kazhagam, which included the elimination of the practice of unequal marriages, Annadurai left from the party to form the Dravida Munnetra Kazhagam.[356] N.V.Natarajan, M.Karunanidhi, E.V.K.Sampath, V.R. Nedunchezhiyan. K.A. Mathiyazhagan and K. Ambazhagan were the founder members of the Kazhagam. M.Karunanidhi and Annadurai used their powerful pens to write thought provoking Cinema dialogues. Their dialogue and the stars, who mouthed it like M.G.Ramachandran, S.S.Rajendran, K.R. Ramasamy and M.R. Radha had tremendous influence on the highly volatile electorate and won support for the D.M.K. The D.M.K. membership has grown yearly at accelerating rates and by 1960, it had enrolled 175000 members in the party.

In the first-General Elections of 1951-52, the Congress Party in Madras captured 133 of the 190 seats in the Legislative Assembly. Neither the D.K. nor the D.M.K. contested the elections. The D.M.K. supported Independent candidates and two opposition parties, the Tamil Nadu Toilers Party and the Commonweal Party.

In 1952, C.Rajagobalachariar (Rajaji) became the Chief Minister. The D.M.K. organised protests against the increasing economic domination of the North and Rajaji's 'Kulakalvi' scheme (children to be educated in their father's profession also). C.N.Annadurai, E.V.K.Sampath, N.V. Natarajan, V.R.Nedunchezhiyan and K.A.Mathiyazhagan, the big five of the D.M.K. were taken to custody under preventive arrest. In Kallakudi (near Tiruchirappalli) and Thoothukudi police opened fire, killing six youths and altogether more than 6000 demonstrators were arrested during the day's agitation. M.Karunanidhi led the protest in Kallakudi by laying his head on the rail to stop the train Kallakudi was selected because the Dalmia cement Industry was located there.

Rajaji had to resign as the Chief Minister as his 'Kula Kalvi' scheme was opposed not only by the D.M.K. but also by a large number of Congress men. It resulted in the take over of Chief Ministership by K.Kamaraj , an astute politician then the President of the Tamil Nadu Congress Committee. He entered into the Congress Committee. He entered into the Congress in 1920, took part in the National Movement and was put into jails for six times. He was termed as the 'King maker' as he would play major role in the choice of Prime Ministers and Chief Ministers. When Kamaraj was the Chief Minister, the Central Government tried to impose Hindi in Tamil Nadu as the official language. E.V.Ramasamy opposed it and announced that his party would burn the National Flag to express opposition to the imposition of Hindi on unwilling people. The Chief Minister condemned the proposed agitation. Meanwhile the Union Government issued a statement assuring the people of South India that there was no question of imposing Hindi on anyone.

In the second General Elections (1957) the D.M.K. contested in 112 constituences out of 201 and returned elected in 15 constituencies for the Madras Legislature. Two Loksabha Constituencies were also won by the D.M.K. The Congress won 151 seats of the Madras Legislature and K.Kamaraj formed the Ministry. In the third General Elections of 1962, the D.M.K. improved its position in the Legislature by winning 50 seats out of 143 it contested. The Congress secured 139 seats out of the 206 constituencies and K.Kamaraj formed Ministry in the Madras State. The speaker of the Assembly S.Chellapandian was from Tirunelveli. In 1963, M.Bhakthavatchalam, replaced K.Kamaraj as the Chief Minister.

Anti-Hindi Agitation - 1965

On January 26, 1965, in pursuance of Article 343 of the Constitution, Hindi became the official language of India. Tamil Nadu which had been opposing the imposition of Hindi for long reacted predictably in the preceding weeks. Rajaji, who supported the imposition of Hindi in 1937, now convened a State anti-Hindi Conference in Tiruchirappalli on 17 January 1965. The D.M.K. designated January 26 as the day of mourning. The students of Tamil Nadu opposed the imposition of Hindi vehemently and there were processions and meetings all over Tamil Nadu and the effigies of the 'Hindi Demonness' were burnt. The Chief Minister M.Bhaktavatsalam, threatened the students with stern action against their participation in politics and warned that agitations on Republic Day would not be tolerated. In compliance with the demand that 26 January should not be dishonoured, the students throughout the State decided to demonstrate their opposition to Hindi one day earlier (i.e.) on 25 January. In the two months of anti-Hindi agitation, more than sixty people were shot dead by police firing and unofficial reports placed the number of death as high as 300. The D.M.K. leaders were taken in to preventive custody on 25 January 1965.

The Congress stand in the anti-Hindi agitation and the food crisis that followed favoured the DMK in the 1967 General Elections. The DMK captured the power and C.N.Annadurai became the Chief Minister of Tamil Nadu. On his premature death in 1969 . V.R.Nedunchezhiyan became the interim Chief Minister. Later, M. Karunanidhi was elected as the Chief Minister. In the Fifth General Elections for the Tamil Nadu Legislature D.M.K. was returned to power with greater majority. As the emergency was clamped in 1976, the Ministry was dissolved and DMK leaders were arrested under Maintenance of Internal Security Act (MISA). Tamil Nadu was under President's Rule from 31, January 1976 to 30 June, 1977. By then M.G.Ramachandran, a popular D.M.K. leader, a cine artiste and the party treasurer had come out of the party and floated his own Party called All India Anna Dravida Munnetra Kazhagam (AIADMK). His party became popular in a very short period and captured power in the Sixth General Elections held in 1977, M.G.Ramachandran was elected Chief Minister of Tamil Nadu and he continued to be the Chief Minister until his death. In the Seventh and Eighth General Elections in 1980 and 1985 respectively, the AIADMK retained power in Tamil Nadu. In 1987, M.G.Ramachandran died and V.R.Nedunchezhiyan was appointed as the interim Chief Minister. Later, the widow of M.G.Ramachandran V.N.Janaki was elected the Chief Minister in January 1988. But, the Government was dissolved on 31 January 1988 and the President's Rule was imposed. In the Ninth General Elections held in 1989,

the DMK returned to power after thirteen years. M.Karunanidhi became the Chief Minister. But, this Government was dissolved and the President's rule was declared in 1991. In the tenth General Elections, J.Jayalalitha, who took the mantle of M.G. Ramachandran as the AIADMK Leader came to power. In the Eleventh General Elections held in 1996, the DMK was once again voted to power in Tamil Nadu and M.Karunanidhi formed the ministry.

Movement for the merger of Shenkottai taluk with Tamil Nadu.

Shenkottai is a vital pass between the Pandya and the Chera countries. Being situated in the border it had been a bone of contention between the rulers of Tamil Nadu and Kerala though the major population consists of the Tamils. During the operation against the Palayakkars in the south the British were in need of the help from the Travancore Kings. In December 1766 the representatives of the Nawab and the Travancore King held a conference in Palayamkottai which caused a settlement on 14 December by which tbhe Nawab recognised the western ghats as the general boundary of his territory but ceded Kanniyakumari and Shenkottai, situated on either side of the ghats, to Travancore.[358] Raja on his part abaondoned his claim over Kalakadu and paid compensation for Shenkottai and Kanniyakumari. The Raja also consented to pay 4000 Travancore chakrams together with an elephant as the annual tribute to the Nawab, as they used to pay to the Nayaks, for the possession of Shenkottai. When in 1801, the carnatic treaty was signed between the Nawab and the East India Company the Nawab was permirtted to retain the possession of the Tiruchirappalli palace and to receive the customary peisush from Travancore State for Kanniyakumari and Shenkottai.[359] But the Travancore authorities did not admit that Shenkottai was ever a zamindari under the Nawab. Finally, it continued under the rule of the Travancore Kingdom.[360]

The Tamils under the Travancore princely State suffered from discrimination as workers and tenants in the estates of Malayalee landlords. Socially they were treated as untouchables and denied their legal rights. The sucessive Travancore governments ignored Tamil and encouraged Malayalam.[361] The educated Tamils were unable to secure equal oportunities in the administration. In addition, the Tamils wre subjected to social discriminations which included denial of rights to walk on the road, to enter and worship in the temples and even to draw water from the well. Morever even women were not permitted to wear upper garments and sandals and to use umbrellas.

As a historical process, the struggle of Travancore Tamils to begin with, was directed against the forced labour and upper cloth restriction. Subsequently it was developed into a movement for temple entry and ultimately merged with self respect and Tamil integration movement.

When the question of linguistic reorganisation of States emerged, the Travancore Tamils who had already been restive under repressive rule of the Travancore princes joined their fellow Tamils of Madras State and attempted to forge a common Tamil identity.

The demand for a separate Tamil province was voiced for the first time by the Tamil Nadu Congress Committee in July 1938 at its meeting held in Tirunelveli. The demand was reiterated in the meeting held at Madrras in October, 1938.[362]

The formation of the Travancore Tamil Nadu Congress (TTNC) in December 1945 is a watershed in the history of Travancorfe Tamils. Meanwhile, the formation of linguistic provinces assumed great importance in the context of post Independant India. The leaders of Kerala provincial congress demanded a united Kerala on linguistic basis.[363] The leaders of the Malabar Pradesh Congress, the Cochin Congress and the Travancore State Congress resolved to form united Kerala extending from Kasargodu to Kanniyakumari.[364] At the same time the Travancore Tamils wanted to have a separate Tamil area and the idea was rejected by the former. By July 1947, the movement of the Tamils for integration with the Tamil Nadu gathered momentum.

In the meantime, with the efforts of A.Nesamony and P.Jeevanandam (Jeea), the TTNC, extended its activities to the other Tamil areas of Travancore The party now turned its attention on Shenkottai and started its activities under the leadership of Krishnaswamy Karayalar, Sabari Perumal Pillai and A.R.Karayalar.[365] When the States Re -organisation Commission was appointed in 1953 by the Government of India, the TTNC demanded the incorporation of Tamil areas of Travancore with Tamil nadu. The representative of Shenkottai, Sattanatha Karayalar submitted a Memorandum to the States Re-organisation Commission insisting on the inclusion of Tamil speaking taluks including Shenkottai with Tamil nadu.

Since the Government did not pay heed to their representations, the TTNC observed 30th June 1954 as Deliverance day throughout Tamil areas. It was observed peacefully by holding public meetings and passing resolutions condemning the police atrocities and the inaction of the Government.

To address a public meeting at Munnar, A.Nesamony, Abdul Razaak and A.Chidambaranatha Nadar reached there on 3 July 1954.[366] But their entry to Munnar was banned. When they defied the ban order, they were arrested and sentenced to six week imprisonment.[367] In protest against hartals the Tamil leader it conducted hartals throughout the Tamil areas of Travancore.[368]

The Movement at Shenkottai.

Greatly disappointed by the governments indifference to the Tamil's demand, the Travancore Tamil Nadu Congress Unit at Shenkottai started the movement on 4 August 1954. K.Sattanatha Karayalar, and A.R.Karayalar with more than a thousand volunteers picketed the taluk office.[369] The leaders were arrested tried and sentence to six weeks imprisonment and put in Trivandrum jail. On 6 August `1954, the TTNC arranged a public meeting in the Town Hall, Shekottai. V.Champakam Karayalar presided and Swaminathan, Subramanian and Perumal of Shenkottai spoke in support of the Tamils integration with the motherland, Tamil Nadu. About 500 volunteers participated in the meeting. According to the decision taken in the meeting, Velayuthan Pilai and Shanmugam Asari of Elathur organised a procession in which 300 persons took part on 7 August, 1954. Hartals and picketing were organised ir the following days and the participants were arrested and sentenced. The Government of Kerala headed by Pattamthanupillai, went to the extent of firing to subdue the agitation which caused the fall of Pattam Thanupillais Ministry by a no-confidence motion. These episodes drew the attention of the States Reorganisation Commission which recommended the merger of Shenkottai taluk of Quilon district with Tamil Nadu. Consequently the Shenkottai taluk was merged with Tamil Nadu and formed a taluk of Tirunelveli district with effect from 1 November 1956.

APPENDIX

Freedom Fighters of Tirunelveli District.

1. **Abdul Hameed, V.K.,**- 1909 - Joined the movement in 1929 - Madras Toddy Shop picketing, 1931 - arrested and sentenced on 1.6.1959 - Tirunelveli.

2. **Abdul Hamid Mohamed, K.,** - 1904 - Non.Cooperation Movement, 1922 arrested and sentenced - Tirunelveli.

3. **Abdul Majeed, S** - Civil Disobedience Movement 1930-31- Tirunelveli district.

4. **Abdul Salam, I.** - Foreign cloth shop picketing, 1922 and Nagpur Flag Satyagraha in 1923 - arrested and sentenced to one year - Tenkasi.

5. **Adaviyar, Padahalingam, M.** - b. 4.8.1904 - in Individual Satyagraha 1941 - Tirunelveli.

6. **Adaviyar, Muthukanni, M.** b. 16.5.1915 - Individual Satyagraha 1941, Veeravandallur

7. **Adaviyar, Sudalaimuthu, S.** - Simon Commission boycott, 1927-28 - Civil Disobedience Movement, Foreign cloth shop picketing, Toddy shop picketing, 1932 -Veeravanallur.

8. **Athithan, S.T.** - Individual Satyagraha in 1941 Joined the movement in 1933 - Palayamkottai.

9. **Ananda Krishna Dass, R.V.** - Joined in the August Movement in 1942. - Student movement for making prejudicial speeches - Tirunelveli.

10. **Andiappan, S.** - Joined the movement in 1932 - Civil Disobedience Movement 1932 and Individual Satyagraha, 1940 - Nanguneri taluk.

11. **Annamalai, K.** Joined the movement in 1941 - Individual Satyagraha 1941 - Sankarankoil taluk.

12. **Arasapan, J.** - Joined the movement in 1922 - Anti-War activities 1940 - Tenkasi taluk.

13. **Aravamudan Perumal, S.** Joined the movement in 1925 Simon Commission Boycott, 1927-28 - Civil Disobedience Movement 1932 - Toddy shop, Foreign Cloth shop picketing, 1933 - Individual Satyagraha 1941 and Quit India Movement 1942 - Veeravanallur.

14. **Arokiam Fernanda. M.** Joined and took part in the Toddy shop picketing and Foreign cloth shop picketing in 1932 - Tirunelveli

15. **Arthur, S.** - Joined the movement in 1921 - Toddy shop picketing and foreign cloth boycott 1921 - North Valliyur.

16. **Arumugam, A.S.** Joined the movement in 1941 - Individual Satyagraha 1941 - Sankarankoil taluk.

17. **Arumugam, S.** Joined in August Movement 1942, Thachanallur.

18. **Arumugam, K.V.** joined the movement in 1937 - Toddy shop picketing in 1939 and August Movement 1942, Nanguneri taluk.

19. **Arumugapandian, C**. Joined the movement in 1940 - Individual Satyagraha, 1940 and August Movement 1942 - Tirunelveli.

20. **Arumuga Pandian, N**. Quit India Movement , 1942 Nathankinar.

21. **Asari Arumuga** - Joined in August Movement in 1942 - Tirunelveli

22. **Asari Arunachalam**, Joined in Salt Satyagraha 1930 Palayamkottai.

23. **Asari Ganapathi, C**. Joined in Civil Disobedience Movement 1938 - Nanguneri

24. **Asari Ganapathi, P**. Joined in Civil Disobedience Movement in 1930, Tirunelveli

25. **Asari Kuppan, M**. Joined in the movement in 1923- Tirunelveli

26. **Asari, Muthiah, K**. Joined the movement in 1925 - Toddy shop picketing, Foreign cloth boycott, 1932 and Individual Satyagraha, 1941 - Sankarankoil

27. **Asari, Muthuswami, M**.Joined in Civil Disobedience Movement in 1930 Palayamkottai

28. **Asari, Sankaranarayana, V**. Joined in Anti-war Satyagraha, 1940, Pettai.

29. **Asari, V.Tharavai**, Joined the movement in 1936 - Sankarankoil

30. **Asari, Velayutham, A**. Joined the movement in the salt Satyagraha Movement in 1930 - Tirunelveli

31. **Avudayappan**, Joined the August movement 1942 - Rajakuthalaperi

32. **Ayya Pillai alias Tirumalai**, Joined the Movement in 1929 - in Toddy shop picketing 1942 - Puliyangudi

33. **Baliah, Bagavathar**, Joined the movement in 1931 - Toddy shop picketing, 1931 Sankarankoil.

34. **Baliah,** E.Joined the movement in 1930, Took part in Salt Satyagraha, Toddy shop picketing and foreign cloth boycott 1930-32 - Tiruenelveli

35. **Baliah alias Mayandi Pandithan, M**. Joined in Anti-war Satyagraha in 1941 , Palayamcottai.

36. **Baradan, b**. in Civil Disobedience Movement in 1930, Ambasamudram

37. **Chellappa Joshier, R**.Took part in Civil Disobedience Movement in 1932, Tirunelveli

38. **Chellia M**.Joined the Movement in 1930, Civil Disobedience Movement 1930, Melapalayam.

39. **Chellaiyah, N**.Salt Satyagrah in 1930, Tirunelveli

40. **Chettiar, R.Arunachalam**, R.Joined the movement in 1932, Foreign cloth shop picketing, 1932 Tirunelveli.

41. **Chetty, Balasubramanbia, L.M.K. K**. Joined the movement in 1926, Simon Commission boycott, 1928, Foreign cloth shop picketing, 1932. Quit India Movement, 1942, Sankarankoil.

42. **Chettiar, Duraisamy, S**. Joined the movement in 1930-31, Salt Satyagraha, 1930, Anti-war propaganda 1940 - Tirunelveli.

43. **Chettiar Ganesan,S**.Joined the movement in1930, Nanguneri taluk.

44. **Chettiar, Kandasami**, Joined in Individual Satyagraha, 1940, Ambasamudram

45. **Chettiar, Kasi, S.**; Quit India Movement, 1942, Nagalapuram

46. **Chettiar, Krishnaswami**, Civil Disobedience Movement in 1941, Individual satyagraha, 1941, Sankaranainarkoil

47. **Chettiar, Krishnaswami**, A Joined the movement in 1930, Foreign cloth boycott, 1932, Sankarankoil.

48. **Chetiar, Madasami, S.** Joined the movement in 1935, Individual Satyagraha 1941, Sankaranikoil.

49. **Chettiar, Ponnuswami**, A. Civil Disobedience Movement, 1932, Tirunelveli

50. **Chettiar, Pathidankondan, N**.Joined the movement in 1930 Foreign cloth boycott and Salt Satyagraha 1930, Veeravanallur.

51. **Chettiar, K.Ramasami, G**.Joined the movement in 1928 Individual Satyagraha, 1941.Sankarankoil.

52. **Chettiar, Ramiah, M**.Joined the movement, 1931, Tirunelveli

53. **Chetiar, Sachidanandam, S**.Joined the movement in 1926, Foreign cloth boycott and Toddy shop picketing, 1930, Tirunelveli.

54. **Chettiar, Sankaran, N**.Joined the movement in 1930, Toddy shop picketing, 1930, Melapalayam.

55. **Chettiar, Subramanian, P**.Joined the movement in 1930, Civil Disobedience Movement 1930, Anti-war Movement in 1941 Ambasamudram.

56. **Chettiar, S.S.Ulagamuthu, S**.Joined the movement in 1930, Foreign cloth boycott, Toddy shop picketing 1930-33, Individual Satyagraha and August Movement 1941-42, Sankarankoil.

57. **Chettiar, S.Veerabagu, S.** Joined the movement in 1932, Toddyshop picketing and foreign cloth boycott, 1932, Veeravanallur.

58. **Chettiar, Velayutham, C**.Joined the Movement in 1932, Individual Satyagraha 1941, Sankarankoil.

59. **Chinna Pookiammal**, Civil Disobedience Movement, 1931, Tirunelveli

60. **Chitraputra Sabiah**, Civil Disobedience Movement, Tirunelveli

61. **Chokalingam**, Joined the Movement, 1929, Toddy shop picketing and foreign cloth boycotting and Civil Disobedience Movement, Tirunelveli

62. **Chokalingam, S**.Individual Satyagraha 1940, Tenkasi.

63. **Das, S.Sankara, S**.Salt Satyagraha 1930

64. **Dasaradaram, S**.Joined the movement in 1942.Quit India Movement 1942

65. **Deekshidar, Gomathisankara, G**.Joined the movement in 1907, Civil Disobedience Movement, 1932, Quit India Movement 1942, Kallidaikurichi

66. **Dhalavai, E**.Joined the movement in 1940 - Individual Satyagraha 1940 and August Movement 1942, Ambasamudram

67. **Dhanamoorthi, P**.Joined the movement in 1937, Civil Disobedience Movement, 1941, Ambasamudram

68. **Dhanushkodi, S**.Joined the movement in 1937, Individual Satyagraha, Tirunelveli.

69. **Diraviam, N.K.**Quit India Movement in 1942, Tirunelveli.

70. **Dorairaj Pandian, D.** Joined the movement in 1934, Individual Satyagraha 1940 and Quit India Movement 1942, Tenkasi.

71. **Doss.P.R.**, Anti-war activities 1940, Tirunelveli

72. **Ellappan, P.**Joined in Students' agitation, 1945, Tirunelveli

73. **Engammal, A.**Joined the movement in 1935 Individual Satyagraha, 1941 and August Movement 1942, Sankarankoil.

74. **Esakkiappan, P.**Joined the Movement in 1930, Salt Satyagraha, Foreign Cloth boycotting 1930, Quit India Movement 1942, Tirunelveli

75. **Fernandez, Masilamani, E.**Joined in Salt Satyagraha in 1930 - Tirunelveli

76. **Ganapathi**, Joined the Movement in 1930 - Salt Satyagraha 1930 Tirunelveli town.

77. **Ganapathi Doss alias Ganapathi Pillai**, Joined the Movement 1930 - Salt Satyagraha 1930, Tirunelveli.

78. **Ganapathy Maistry, K.**Joined the Movement in 1942 - Thiruvengadam P.O. Tirunelveli

79. **Gandhimathinathan, A.**Satyagraha 1927 Tirunelveli

80. **Ganesan, A.**Joined the movement in 1931, Palayamkottai.

81. **Govindan, E.**Joined the Movement in 1932, Valliyur

82. **Gurusami, M.G. G.**, Joined the Movement in 1921, August Movement 1942 Tenkasi.

83. **Gurusami, S.**Joined the movement in 1932, Toddy shop picketing 1932 Individual Satyagraha, 1940 and August Movement 1941-42 Sankarankoil taluk.

84. **Harihara Sarma, V.**Civil Disobedience Movement in 1930, Tenkasi

85. **Hariharasubramaniam, G.**Joined the Movement in 1937 - August Movement 1942, Tirunelveli

86. **Irulappan**, Anti-war activities - Tirunelveli

87. **Iyengar, Jagannatha**, Joined in Tirunelveli Conspiracy case, 1911, Tirunelveli

88. **Iyengar, Padmanabha**, P.Civil Disobedience Movement in 1932, Tirunelveli town

89. **Iyengar, Rajagopal, A.**Civil Disobedience Movement in 1932, Nanguneri

90. **Iyengar, Rama, D.**Civil Disobedience Movement in 1932, Nanguneri

91. **Iyengar,Ramakrishna**, Joined the movement in 1927, Civil Disobedience Movement 1932, Thenthirupparai

92. **Iyengar, P.Ramasamy**, Civil Disobedience Movement in 1932, Tirunelveli

93. **Iyengar, Seshachala, S.**, Salt Satyagraha, 1930, Tirunelveli

94. **Iyer, Chellappa, R.**, Civil Disobedience Movement in 1932

95. **Iyer, G.R.Gurusamy**, Joined the Movement in 1930, Non-Co-operation Movement Civil Disobedience Movement 1930-32 and Quit India Movement 1942 Tirunelveli.

96. **Iyer, Harihara, S.**Joined the Movement in 1930 - Salt Satyagraha, 1930, Khader Movement, Liquor Shop picketing, Harijan Movement, Foreign Boycotting, 1932 Kadayam.

97. **Iyer, Krishna, V.**,Civil Disobedience Movement in 1933, Tirunelveli

98. **Iyer, K.R.Krishnamurthi,** in Neil Statue Satyagraha in 1927, Kallidaikurichi.

99. **Iyer, Mahadeva, R**.Joined the movement in 1907, Civil Disobedience Movement, 1931.

100. **Iyer, Nambi, P**.Joined the Movement, during the Non-Cooperation Movement Civil Disobedience Movement 1932, Tirunelveli

101. **Iyer, Narayana, S**.Civil Disobedience Movement, Kallidaikurichi

102. **Iyer, Ramamurthy, R**.Civil Disobedience Movement in 1930, Tirunelveli.

103. **Iyer, Ramasubramanian,** Joined the Movement in 1918, Civil Disobedience Movement, Toddy shop picketing, Foreign Cloth picketing, Palayamkottai.

104. **Iyer, V.V.S.,** - A Revolutionary and Extremist in Indian politics, organised a League in London, violent and revolutionary method for winning Indian freedom in Pondicherry, helped the revolutionary activities, advocated training the free use of arms and heroic deeds for every Indian to free India., organised Bharatwaja Ashram in Cheranmahadevi in 1922, Bharathi Ashram, Tirunelveli.

105. **Iyer, Sadhu Krishnasamy,** Joined the Movement in 1930, Salt Satyagraha 1930, Ambasamudram.

106. **Iyer, Sankara, T.C.C.**, Civil Disobedience Movement in 1931, picketing of Foreign cloth and Liquor shops at Kallidaikurichi and Ambasamudram, Quit India Movement in 1942, Kallidaikurichi.

107. **Iyer, Sankara, S.**Joined the Movement in 1930, Toddy shop and Foreign cloth shop picketing, 1931-32, Kallidaikurichi.

108. **Iyer, Sankara Krishna**, Tirunelveli Conspiracy Case in 1911,Tirunelveli

109. **Iyer, Sivarama,** Civil Disobedience Movement, Kallidaikurichi.

110. **Iyer Sivaramakrishna, S.,** Civil Disobedience Movement 1932, Mannarpallam

111. **Iyer, Subramaniam, S**.Joined the movement in 1936, Individual Satyagraha 1941 Quit India Movement 1942, Kallidaikurichi.

112. **Iyer, Sundaram, K**.Joined the Movement in 1908, Swadeshi Movement, Civil Disobedience Movement, 1932, Naramammalpuram

113. **Iyer, Venkatachalam, S.,** Joined the Movement in 1930, Salt Satyagraha, 1930 Vasudevanallur.

114. **Jagannathan, A.,** Quit India Movement in 1942, Tirunelveli

115. **Jabamalai Barnard, S.,** Joined the movement in 1936, Anti-war Movement 1941-42, Veeravanallur.

116. **Jothir Mayananth, S.,** Joined the Movement in 1930, Individual Satyagraha, 1941, Ambasamudram

117. **Kandasamy, M.**Toddy shop picketing, Individual Satyagraha and August Movement in 1942, Sankarankoil.

118. **Kandasami, V.** Joined the movement in 1929, Salt Satyagraha 1930 and Toddy shop picketing, 1932, Veeravanallur post.

119. **Kandiah,** Joined the movement in 1939, Anti-war Satyagraha, 1940, Ambasamudram.

120. **Karayalar Sattanatha,** Anti-war Satyagraha, 1940, Shencottai.

121. **Karuppasami Pulavar, S.** Joined the movement in 1932, Toddy shop picketing Foreign cloth shop picketing, 1932, Sankarankoil.

122. **Karuppiah, S.** Joined the movement in 1942, Tenkasi taluk.

123. **Konar, Palani, P.** Joined the Movement in 1930, Civil Disobedience Movement 1932, Tirunelveli town.

124. **Konar, Palani, S.** Joined the Movement in 1930, Toddy Shop picketing and Foreign cloth boycotting, 1932, Tirunelveli.

125. **Konar, Subbiah, C.** Joined the Movement in 1930, Civil Disobedience Movement Tirunelveli

126. **Monar, Subbiah, M.**, Civil Disobedience Movement, 1930, Tirunelveli

127. **Krishna Iyer,** Joined the movement in 1900, Swadeshi Movement, 1914 and Non-Co-operation Movement, 1920-22, Ambasamudram.

128. **Krishnan, A.** Salt Satyagraha in 1930 and Civil Disobedience Movement in 1933 Tirunelveli.

129. **Krishnan, S.** August Movement, 1942, Kadaiyanallur.

130. **Krishnaraj, A.V.** Civil Disobedience Movement in 1930, Kallidaikurichi, Ambasamudram

131. **Kumarasamy, B.** Joined the movement in 1932, Toddy shop picketing, 1932, Veeravanallur.

132. **Kuppusamy, S.**, Students Movement in 1942, Tirunelveli

133. Lakshmanan, Joined the Movement in 1938, August Movement 1942 Tirunelveli.

134. **Lakshmanan,** M.Civil Disobedience Movement 1932, Tenkasi.

135. **Lakshmanan, S.**, Joined the Movement in 1942, August Movement, 1942, Keelapudu.

136. **Lakshminarayanan, R.** Joined the movement in 1940, August Movement and induced Government servants to resign their jobs, Pattapathu.

137. **Lakshmi Sankrier,** Joined the Movement in 1919, Salt Satyagraha, Foreign cloth picketing, Toddy shop picketing and village propaganda, 1931, Kallidaikurichi.

138. **Mahadevan, P.**, Quit India Movement in 1943, Tenkasi.

139. **Mahalingam, S.** Joined the Movement in 1936, Toddy shop picketing, Individual Satyagraha and August Movement, 1940-42, Karivalamvanthanallur.

140. **Malleruperumal, V.** Joined the Movement in 1942, August Movement 1942 Kadayanallur.

141. **Maistry Ganapathy, R.**, Joined the Movement in 1936, August Movement 1942, Tirunelveli town.

142. **Maistry, T.S.Isakki, C.**, Joined the Movement in 1928, Toddy shop picketing, Foreign cloth shop picketing, 1932, Civil Disobedience Movement, 1932 Tenkasi.

143. **Mani, K.B.S.**, Joined the movement in 1940, Tirunelveli district.

144. **Mani, S.**, Salt Satyagraha in 1930, Tirunelveli.

145. **Maniagaran, Alagu, M.**, Quit India Movement in 1942, Tirunelveli district.

146. **Manickavasagam, K.**, Joined the Movement in 1927, Foreign cloth boycott and Liquor shop picketing, 1929-30, Palayamkottai.

147. **Manthiram, P.**, Joined the Movement in 1928, Non-cooperation Movement and Anti-war Speeches, 1922, Nanguneri taluk.

148. **Marakayar Mohideen Ibrahim, M**, Joined and took part in the freedom movement in 1922, Tirunelveli.

149. **Marthandam, Shunmugathammal**, Took active parts in all movements from 1921 Worked for the women welfare and removal of untouchability, Vizianarayanam.

150. **Marthandam, Veerabahu, S.**Joined the Movement in 1921, Toddy shop picketing and Individual Satyagraha, 1941, Tirunelveli

151. **Mavuliraja, P.**, Joined the Movement in 1940, August Movement, 1942 Tiruchendur.

152. **Meenakshisundharam, V.**, Joined the Movement in 1940, Individual Satyagraha 1941, Vikramasingapuram.

153 **Meenakshisundaram, S.**, Joined the Movement in 1927, Toddy shop picketing in 1932, Individual Satyagraha in 1940-41, Sankarankoil.

154. **Md.Ibrahim, A.**, Non-Cooperation Movement 1922, Pettai

155. **Mohammed Ismail,** Joined the Movement in 1921 Nagpur Flag Satyagraha Movement 1923, Pettai.

156. **Mohammed Mohideen**, Anti-war propaganda in 1941, Tenkasi.

157. **Mohideen Ibrahim Maricar, M.**, Joined the Movement in 1921, Toddy shop picketing in 1922-23, Tirunelveli.

158. **Mookiah Velar**, Individual Satyagraha Movement, 1940. Sankarankoil.

159. **Moopan, Chelliah** alias Easikkimuthu Moopan, T., Civil Disobedience Movement in 1932 Reddipuram.

160. **Moopanar, Chidambaram, A.**, Joined the Movement in 1928, Individual Satyagraha 1941, Sivagiri p.o.

161. **Moopanar, Esakkimuthu, P.**, Toddy shop picketing, 1932,Individual Satyagraha, 1941 Quit India Movement 1942, Ambasamudram.

162. Mooppanar, Kalimuthu, S., Joined the Movement in 1920, Vedaranyam Satyagraha, 1930, Sivagiri.

163. **Mooppanar,Karuppiah, S.**, Joined the Movement in 1933, Toddy shop picketing and Foreign cloth boycotting, 1933, Tirunelveli.

164 **Mooppanar, Mayandi, M.**, Civil Disobedience Movement in 1933, Tenkasi

165 **Mooppanar, Subbiah, R.**, Joined the Movement in 1933, Toddy shop picketing and foreign cloth boycotting, 1933, Sivagiri.

166 **Moopanar, Subramania, N.**, Joined and took part in Salt Satyagraha, 1930 Palayamkottai.

167. **Mudaliar, Velu, S.**, August Movement in 1942, Tirunelveli.

168. **Mudaliar, Angappa, A.**, Joined the Movement in 1930, Foreign cloth picketing, 1931, Toddy shop Picketing in 1932, Individual Satyagraha in 1940 August Movement in 1942, Tirunelveli.

169. **Mudaliar, Arumugam, S.**, Joined the Movement in 1935, Took part in 1941 and 1942 Movements,Puliankudi.

170. **Mudaliar, Chockalinga, S.**, Joined the Movement in 1932, Salt Satyagraha, 1932, Ambasamudram.

171. **Mudaliar, A.Lakshmana**, Civil Disobedience Movement 1932, Veeraraghavapuram

172. **Mudaliar, Muthu, M.**, Civil Disobedience Movement, 1931-32, Sankarankoil.

173. **Mudaliar, Nallathambi alias Nallamuthu Mudaliar, N.**, Joined in Civil Disobedience Movement and Liquor shop picketing, 1934, Pappankulam.

174. **Mudaliar, Perumal, R.**, Civil Disobedience Movement in 1932, Palayapathi.

175. **Mudaliar, V.S.Sankara Subramania, S.**, Joined the Movement in 1921, Foreign cloth shop picketing, Toddy shop picketing in 1932 and 1934, Quit India Movement in 1942, Tirunelveli.

176. **Mudaliar, S.T.Shanmugam**, Joined the Movement in 1926, Individual Satyagraha Movement in 1941, Sankarankoil.

177. **Mudaliar, Subbiah alias Subbiah Pillai**, Anti-War Activities, 1940, Tirunelveli.

178. **Mudaliar, Subbiah, A.**, Individual Satyagraha, 1940, Ambasamudram

179. **Mudaliar, Subramania**, Joined the Movement in 1931, Foreign cloth shop picketing, Toddy shop picketing, 1932, August Movement, 1942, Tenkasi.

180. **Mudaliar, Sundara**, Toddy shop picketing in 1931, Tirunelveli.

181. **Mudaliar, Sundara Mahalinga, S.**, Joined the Movement in 1929, Salt Satyagraha, Civil Disobedience Movement, 1930-32, August Movement 1942, Pazhayapettai.

182. **Mudaliar, Thirugnanam, M.**, Anti-War Satyagraha, 1941, Sankarankoil.

183. **Mudaliar, Thirumalaiyandi, K.** Joined the Movement in 1933, Individual Satyagraha, 1941, Keelapavur.

184. **Muthiah, R.**, Joined the Movement in 1927, Salt Satyagraha, 1930, Civil Disobedience Movement 1932, palayamkottai.

185. **Muthu, E.**, Quit India Movement 1942, Tirunelveli.

186. **Muthukrishnaswami, G.**, Joined the Movement in 1932, Foreign cloth boycotting, 1940, Palayamkottai.

187. **Muthusamy, A.**, Joined the Movement in 1925, Civil Disobedience Movement 1930, Quit India Movement 1942, Tirunelveli

188. **Muthusamy, T.S.**Joined the Movement in 1930, Toddy shop picketing and Foreign cloth boycott, 1930-32, Tirunelveli.

189. **Muthusami, T..**, Joined the Movement in 1930, Civil Disobedience Movement and Toddy shop picketing 1932, Indiv idual Satyagraha, 1941, Quit India Movement, 1942, Veeravanallur.

190. **Nadar, Arjuna, S.**, Quit India Movement, 1942, Sadayapuram.

191. **Nadar, Arunachala**, Accused in the attack of Keeranur Salt Factory in 1942 Tirunelveli.

192. **Nadar, Kalimuthu, R.**, August Movement, 1942, Mukkudal.

193. **Nadar, Maharaja, A.**, accused in Kulasekarapattinam Conspiracy case and Kurumbur Railway Station burning case in 1942, Nanguneri.

194. **Nadar, Maria Vellaiya, A.**, Joined the Movement in 1935, Salt Satyagraha, Toddy shop picketing, Foreign cloth boycotting, Civil Disobedience Movement, 1930-32 Rajapalayam.

195. **Nadar, Muthumalai, K.**, August Movement, 1942, Tirunelveli.

196. **Nadar, Samuvel, V.**, Joined the Movement in 1933, Toddy shop picketing, Quit India Movement 1942, Valliyur.

197. **Nadar, Swaminathan, M.**, Joined the Movement in 1929, Toddy shop picketing, 1929, Tenkasi.

198. **Nagalingam, N.**, Joined the Movement in 1930, Civil Disobedience Movement in 1932, Quit India Movement 1942, Kadayanallur.

199. **Nagarajan, V.S.**, Individual Satyagraha Movement, Sankarankoil.

200. **Naicker, Ayyappa, A.**, Joined the Movement in 1942, August Movement 1942, Tirunelveli.

201. **Naicker, Bangarusami**, Toddy shop picketing at Koilpatti, 1931, Tirunelveli.

202. **Naicker, Chinnasamy, M.**, Joined the Movement in 1939, August Movement 1942, Sankarankoil.

203. **Naicker, Chockaiah, A.**, Anti-War Propaganda, 1940,Tirunelveli.

204. **Naicker, G.Lingava**, Joined the Movement in 1930, Individual Satyagraha, 1941, Sankarankoil taluk.

205. **Naicker, Nagaraja,** Anti-War, Satyagraha in 1941, Sankarankoil.

206. **Naicker, Perumal, R.**, Anti-War Propaganda, 1941, Mavadikkal.

207. **Naicker, Perumalsamy, R.**, Joined the Movement in 1942, August Movement, Kazhukachalapuram.

208. **Naicker, Raja**, Joined the Movement in 1941, Individual Satyagraha, 1941, Puliankudi.

209. **Naicker, Ramasamy, R.**, Joined the Movement in 1942, August Movement 1942, Kazhukachalapuram, Tirunelveli.

210. **Naicker, Sangalppa**, Joined and took part in August Movement 1942, Sankarankoil.

211. **Naicker, Sankarappa**, Toddy shop picketing in 1931, Tirunelveli.

212. **Naicker, Sathurappa**, S.Joined the movement in 1935, August Movement 1942, Sankarankoil taluk.

213. **Naicker, Sholava, R.**, Joined in Individual Satyagraha Movement, 1941, Sankarankoil taluk.

214. **Naicker, Srinivasaka, A.**, Joined the Movement in 1932, August Movement 1942, Kazhukachalapuram.

215. **Naicker, Srinivasaka, N.**Joined the movement in 1942, August Movement 1942, Kazhukachalapuram

216. **Naicker, Srinivasaka, V.**, Joined the Movement in 1942, August Movement 1942, Kazhakachalapuram.

217. **Naicker, Srinivasan, G.**, Foreign Cloth Picketing, Toddy shop Picketing,1932 Singathakurichi.

218. **Naicker, Subbia, S.**, Joined the Movement in 1942 August Movement, 1942 Sankarankoil.

219. **Naicker, Venkatasamy,** Joined the Movement in 1942, August Movement 1942, Kazhukachalapuram.

220. **Naicker, Venkatasamy, V.,** Joined the Movement in 1930, Civil Disobedience Movement 1932, August Movement 1942, Sankarankoil taluk.

221. **Naicker, Venkatasamy, V.,** Joined the Movement in 1936, August Movement 1942, Panthapulli.

222. **Naidu, V.P.Alagirisami,** Anti-War Propaganda 1941, Tirunelveli.

223. **Naidu, G.**, Joined the Movement in 1930, Toddy shop, Foreign cloth shop picketing, 1930-31 Quit India Movement 1942, Karivalam Vanthanallur.

224. **Naidu, Kamatchi, S.**, Joined the Movement in 1906, Swadeshi Movement 1906, Toddy shop picketing, Foreign cloth shop picketing, Salt Satyagraha, 1932, Kokkirakulam, Tirunelveli.

225. **Naidu, Perumal, T.**, Joined the Movement in 1927, Simon Commission Boycotting 1928, Foreign cloth boycotting 1932, August Movement 1942 Tenkasi.

226. **Naidu, N.A.Rajagopal**, Civil Disobedience Movement, 1933, Tirunelveli.

227. **Naidu, Ramasamy**, Freedom Struggle 1925, Tenkasi

228. **Naidu, Sankaranarayana, S.**, August Movement 1942, Mukkudal, Tirunelveli.

229. **Naidu, Seetharaman, L.,** Joined and took part in the Civil Disobedience Movement in 1931, Sankarankoil taluk.

230. **Nallaperumal, M.**, Joined the Movement in 1941, Individual Satyagraha, 1941, August Movement 1942, Sankarankoil.

231. **Narasimha Rao, C.S., S.** Joined the Movement in 1923, Civil Disobedience Movement 1932, Ellayapuram, Tirunelveli.

232. **Narayanan, T.P., N.**, Joined the Movement in 1941, Individual Satyagraha 1941, Sankarankoil.

233. **Narayanasamy, R.**, August Movement 1942, Sankarankoil.

234. **Natarajan, M.**, Joined the Movement in 1927, Foreign cloth shop picketing, 1932, Individual Satyagraha, 1941, Quit India Movement 1942, Tirunelveli town.

235. **Nayagam, K.V.P.**, Joined the Movement in 1930, Salt Satyagraha, Non-Cooperation Movement, Nanguneri taluk.

236. **Neelakanda Brahmachari, K.**, Close associate and co-accused of Vanchinathan in Ashe murder case, the first accused in the case of conspiracy for the murder of the Collector of Tirunelveli, Mr.Ashe in the Maniyachi Railway Station on 17 June 1911,Tirunelveli.

237. **Oorkavalan, P.,** Joined the Movement in 1937, Individual Satyagraha 1940-41, Sankarankoil.

238. **Padmanabha Subbiah,** Civil Disobedience Movement, 1931, Tirunelveli town.

239. **Palanisami, T.,** Joined the Movement in 1932, Simon Commission boycott, 1928 Toddy shop picketing 1932, Individual Satyagraha, 1940, Tirunelveli.

240. **Paliya Kudumbar, S.K.**Joined the Movement 1927, Joined the Toddy shop picketing, Foreign cloth boycott, 1932, Sankarankoil taluk.

241. **Paul Ramasamy, P.,** Joined the Movement during Salt Satyagraha in 1930 Tirunelveli.

242. **Pandaram, Sivanandi, M.,** Joined the Movement in 1942, August Movement in 1942, Tirunelveli.

243. **Pandaram, Subbiah, M.,** Joined the Movement in 1933 Toddy shop picketing and Foreign cloth boycotting 1933, Sivagiri.

244. **Pandaram, Subbiah, S.,** Joined and took part in August Movement 1942 Tirunelveli.

245. **Pandian, M.K.T.,** Civil Disobedience Movement, Tirunelveli.

246. **Parvathy Ammal, K.,** Joined and took part in the National Movement in 1931, Tenkasi.

247. **Pasumathi, P.,** Joined the Movement in 1933, Toddy shop picketing and Foreign cloth boycotting, 1935, Sankarankoil taluk.

248. **Pathari, S.Sankaralinga,** Joined the Movement in 1922, Nagpur Flag Movement 1923, Toddy shop picketing, 1932, Tirunelveli.

249. **Peramanayakam, N.,** Joined the Movement in 1929, Individual Satyagraha 1941, Tirunelveli.

250. **Perumalsamy, K.R.,** Joined the Movement in 1942, August Movement 1942 Kadayanallur.

251. **Perumalsamy, N.V.,** Joined the Movement in 1936, Individual Satyagraha in 1941, Sankarankoil taluk.

252. **Pillai, Alagappa,S.V.,** Joined the Movement in 1907

253. **Pillai, S.N Ambalavana, N.,** Joined the Movement in 1928, Quit India Movement 1942, Sankarankoil.

254. **Pillai, Annamalai, P.,** Joined the Movement in 1930, Civil Disobedience Movement, 1932, Individual Satyagraha 1940, Tirunelveli.

255. **Pillai, Annamalai, V.,** Salt Satyagraha in 1930, Tirunelveli

256. **Pillai, Appavu, P.,** Civil Disobedience Movement in 1932, Tirunelveli

257. **Pillai, Arasappa, S.,** Civil Disobedience Movement 1932, Tirunelveli.

258. **Pillai, Arumugham,** Joined the Movement in 1931, Toddy shop picketing, Foreign Cloth shop picketing, 1932, Quit India Movement 1942, Tirunelveli.

259. **Pillai, Arumugam, S.,** Civil Disobedience Movement in 1932, Tirunelveli.

260. **Pillai, Arunachalam,** Joined the Movement in 1929, Salt Satyagraha,1930 Tirunelveli.

261. **Pillai, Arunachalam**, Joined the Movement in 1942, August Movement 1942, Tirunelveli.

262. **Pillai (Chavadi), Arunachalam**, Joined the Movement in 1910, one of the accused in Ashe Murder Case, Shencottai.

263. **Pillai, Arunachalam, C.**, Salt Satyagraha in 1930, Tirunelveli.

264. **Pillai, Auvudianayagam, A.**, Joined the Movement in 1927, Foreign cloth shop picketing, Toddy shop picketing, August Movement 1942, Sankarankoil.

265. **Pillai, Ayya**, Joined the Movement in 1930, Civil Disobedience Movement, 1931, Tirunelveli.

266. **Pillai, Bapu**, Tirunelveli Conspiracy, (Ashe Murder) case, 1911, Tirunelveli.

267. **Pillai, Brimanayagam, N.**, Civil Disobedience Movement, 1932, Tirunelveli.

268. **Pillai, Chidambaram, A.**, Civil Disobedience Movement in 1932, Veeravanallur.

269. **Pillai, Chidambara, P.**, Joined the Movement in 1927, Civil Disobedience Movement 1932, Tirunelveli.

270. **Pillai, Chockalingam**, P., August Movement 1942

271. **Pillai, Chockalingam, A.**, Joined the Movement in 1941, Individual Satyagraha, 1941, Ukkirankottai.

272. **Pillai, Dhulavai Nallasivam**, Joined the Movement in 1930, Salt Satyagraha 1930, Foreign cloth boycotting, Toddy shop picketing 1932, Tirunelveli.

273. **Pillai, Dhanabakkiam, R.**, Civil Disobedience Movement, Veeraraghavapuram/ Tirunelveli.

274. **Pillai, Ganapathiah**, Anti-war propaganda, 1940-41, Tirunelveli

275. **Pillai, Essayanandam, S.**, Joined the Movement in 1926, August Movement in 1942, Ambasamudram taluk.

276. **Pillai, Eswaramoorthy, C.**, Quit India Movement in 1943, Tirunelveli.

277. **Pillai, Gandhimathinathan, N.**, Joined the Movement in 1930, Civil Disobedience Movement, Foreign Cloth boycotting and Toddy shop picketing, 1932, Tirunelveli.

278. **Pillai, Gomathinayagam, S.**, Took part in Quit India Movement, 1942 Tirunelveli.

279. **Pillai, Govindan alias Gandhi**, Joined the Movement in 1930, Foreign cloth boycotting and Toddy shop picketing, 1932, Tirunelveli.

280. **Pillai, Isakkia, N.**, Joined the Movement in 1915, Kilafat Movement, 1920 Foreign cloth picketing, 1930 and August Movement 1942, Tirunelveli.

281. **Pillai, Isakkia, R.**, Joined the Movement in 1930, Toddy shop picketing and Foreign cloth shop picketing, 1930-31, Tirunelveli.

282. **Pillai, Kailasam, K.**, Joined the Movement in 1938, Individual Satyagraha in 1941, Tirunelveli.

283. **Pillai, Kalimuthu, V.**, Civil Disobedience Movement 1932, Tirunelveli.

284. **Pillai, Kalimuthu, V.**, Civil Disobedience Movement, 1932, Tirunelveli.

285. **Pillai, Kandasami, S.**, Joined the Movement in 1928, Salt Satyagraha, Civil Disobedience Movement, 1928, Salt Satyagraha, 1930-32 August Movement 1942, Tirunelveli district.

286. **Pillai, Kandasami, V.**, Joined and took part in Salt Satyagraha, 1930 and Quit India Movement, 1942, Tirunelveli.

287. **Pillai, Karmegam,A.**, Civil Disobedience Movement in 1932, Tirunelveli.

288. **Pillai, Karuppiah**, Joined the Movement in 1923 Toddy shop picketing, 1932 Tirunelveli.

289. **Pillai, Karuppiah**, Joined the movement in 1942, Tirunelveli.

290. **Pillai, Koil**, Joined the Movement in 1939, Quit India Movement, 1942, Tirunelveli.

291. **Pillai, Krishna, P.**, Joined the Movement in 1930, Toddy shop picketing, 1932, August Movement 1942, Tirunelveli.

292. **Pillai, Krishnan, S.**, Joined the Movement in 1930, Civil Disobedience Movement 1932, Tirunelveli.

293. **Pillai, Krishnaswami, V.**,Quit India Movement in 1942, Tirunelveli.

294. **Pillai Lakshmana**, Quit India Movement in 1942, Tirunelveli

295. **Pillai, A.Lakshmana**, Joined the Movement in 1927, Civil Disobedience Movement, 1932, Tirunelveli.

296. **Pillai, M.**, Joined the Movement in 1929, Civil Disobedience Movement 1932, Tirunelveli.

297. **Pillai, Nagalingam, M.**, Joined the Movement in 1932, August Movement, 1942, Tirunelveli.

298. **Pillai, Nallaperumal, M.**, Individual Satyagraha, 1941, August Movement 1942, Tirunelveli.

299. **Pillai, Nataraja**, Anti-war Propaganda, 1940, Tirunelveli.

300. **Pillai, M.Nataraja**, Quit India Movement, 1942, Tirunelveli.

301. **Pillai, Natarajan**, Quit India Movement, 1942, Tirunelveli.

302. **Pillai, Nataraja, S.**, Civil Disobedience Movement 1932, Tirunelveli.

303. **Pillai, Nellaiyappa, A.**, Joined the Movement in 1930, Civil Disobedience and Non cooperation Movements, 1930-32, Tirunelveli.

304. **Pillai, Nellayappa**, Joined the Movement 1930, Foreign cloth boycott, 1932, Tirunelveli.

305. **Pillai, Nellaiyappa, S.V**.Joined the Movement in 1930, Salt Satyagraha and Foreign cloth shop picketing, 1930-32, Tirunelveli.

306. **Pillai, Nelliah**, Civil Disobedience Movement 1932, Tirunelveli.

307. **Pillai, Palani, M.**, Joined the Movement in 1930, Civil Disobedience Movement 1932, Tirunelveli.

308. **Pillai, Palanikumarasami, T.**, Joined the Movement in 1930, Salt Satyagraha 1930, Tirunelveli.

309. **Pillai, Pandiyan**, Joined the Movement in 1928, Foreign cloth shop picketing and Liquor shop picketing, 1932, Tirunelveli.

310. **Pillai**, Joined the Movement in 1916, Individual Satyagraha, Tirunelveli.

311. **Pillai, Paramasivam, D.**, Civil Disobedience Movement in 1932, Tirunelveli.

312. **Pillai, Periyanagam, N.**, Civil Disobedience Movement in 1932, Tirunelveli.

313. **Pillai, Pichia, V.**, Joined the Movement in 1928, Foreign cloth shop picketing and Individual Satyagraha, 1941, Tirunelveli.

314. **Pillai, Pitchaiah, K.**, Anti-war activities, 1941, Tirunelveli.

315. **Pillai, Ponnappa, A**. Joined the Movement in 1929, Salt Satyagraha, 1930, Toddy shop picketing and foreign cloth boycotting, 1932, Tirunelveli.

316. **Pillai Ponniah alias Pillai**, Joined the Movement in 1930, Foreign cloth boycotting 1932, Tirunelveli.

317. **Pillai, Ponniah, N.**, Joined the Movement in 1930, Civil Disobedience Movement in 1930, Tirunelveli.

318. **Pillai, Raja, K.**, Civil Disobedience Movement in 1932, Tirunelveli.

319. **Pillai, Ramakrishna, V.**, Quit India Movement in 1940, Tirunelveli.

320. **Pillai, G A.Ramanathan**, Civil Disobedience Movement in 1930, Toddy shop picketing and Civil Disobedience Movement, 1931-32, Tirunelveli.

321. **Pillai, Ramasamy, C.**, Joined the Movement in 1930, Toddy shop picketing and Foreign cloth boycotting 1932, Tirunelveli.

322. **Pillai,K.Ramasamy**, Individual Satyagraha in 1941, Tirunelveli.

323. **Pillai,S.Ramasamy**, Joined the Movement in 1922, Foreign cloth shop picketing, 1932, Tirunelveli.

324. **Pillai, S.R.Ramasamy,** Joined the Movement in 1920, Civil Disobedience Movement 1932, Tirunelveli.

325. **Pillai, S Ramasamy**, Joined Salt Satyagraha Movement in 1930, Tirunelveli.

326. **Pillai, Rathnavelu,C.**, Joined the Movement in 1936, Individual Satyagraha, 1941, Tirunelveli.

327. **Pillai,R.S.Sachithandam**, Joined the Movement in 1920, Civil Disobedience Movement, Foreign cloth boycotting and Toddy shop picketing 1930, Tirunelveli.

328. **Pillai, Sankaran,V** Joined the Movement in 1930, Civil Disobedience Movement 1933, Tirunelveli.

329. **Pillai, Sankarakuttan**, August Movement in 1942, Tirunelveli

330. **Pillai, Sankarasubramania**, Civil Disobedience Movement 1931. Tirunelveli.

331. **Pillai, Santhanam, P**, Joined the Movement in 1928, Salt Satyagraha, 1930, Foreign cloth boycotting,Toddy shop picketing, 1932, Individual Satyagraha, 1941, Tirunelveli.

332. **Pillai,Savana** Civil Disobedience Movement, 1931,Tirunelveli.

333. **Pillai, Seetharamalingam** , Civil Disobedience Movement, 1930, Tirunelveli.

334. **Pillai, Senthil Vinayagam,** Joined the Movement in 1930 Foreign cloth shop picketing, 1932, Tirunelveli.

335. **Pillai, Sethul, V.**, Joined the Movement in 1928, Salt Satyagraha, Civil Disobedience Movement, Foreign cloth boycotting, 1930-32, Tirunelveli.

336. **Pillai, Sethuramalingam, A.**, Joined the Movement in 1932. Foreign cloth boycotting, 1932, Tirunelveli.

337. **Pillai, Sethuramalingam, C.**, Joined the Movement in 1930, Salt Satyagraha, Foreign cloth boycotting 1930-32, Tirunelveli.

338. **Pillai, Sethuramalingam, C.**, Joined the Movement in 1930,Civil Disobedience Movement, 1932, Tirunelveli.

339. **Pillai, Shanmugam, S.**, Joined the Movement 1930, Civil Disobedience Movement, 1930, Tirunelveli.

340. **Pillai, Shanmugam**, Joined the Movement in 1930, Salt Satyagraha, Toddy shop picketing, 1930, Tirunelveli.

341. **Pillai, S.S.Shanmuga, S.**, Joined the Movement in 1930, Took part in all Movements from 1930 to 1941, Tirunelveli.

342. **Pillai, Shanmugam, S.**, Individual Satyagraha, 1941, Tirunelveli.

343. **Pillai,Sivagamisundaram, M.**, Civil Disobedience Movement 1932, Tirunelveli.

344. **Pillai, Sivakaminatha, V.**, Joined the Movement in 1929, Civil Disobedience Movement, 1932, Tirunelveli.

345. **Pillai, Sivaprakasam, N.**, Civil Disobedience Movement 1932, Tirunelveli.

346. **Pillai, Sivarama, V.**, Civil Disobedience Movement, 1932, Tirunelveli.

347. **Pillai, S.Somu**, Joined the Movement in 1930, Civil Disobedience Movement Foreign cloth shop picketing, Tirunelveli.

348. **Pillai, Srinivasan, S.**, Civil Disobedience Movement, 1932, Tirunelveli.

349. **Pillai, Srinivasan, P.**, August Movement in 1942, Tirunelveli.

350. **Pillai, Subbiah**, Civil Disobedience Movement, 1931, Tirunelveli.

351. **Pillai, Subbiah**, alias Subramania Pillai, Tirunelveli.

352. **Pillai, Subbiah, A.**, Joined the Movement in 1930, Salt Satyagraha 1930, Toddy shop picketing and Foreign cloth boycotting, 1932, Tirunelveli.

353. **Pillai, Subbiah, M.**, Civil Disobedience Movement, 1930, Tirunelveli.

354. **Pillai, Subbiah, S.**, Civil Disobedience Movement, 1932, Tirunelveli.

355. **Pillai, Subbiah, S.**, Civil Disobedience Movement, 1932, Tirunelveli town,Tirunelveli.

356. **Pillai, Subramania, G.**, Civil Disobedience Movement, 1932, Tirunelveli.

357. **Pillai, Subramania, S.**Joined the Movement in 1929, Salt Satyagraha, 1930, Tirunelveli

358. **Pillai, Subramania, V.**, Civil Disobedience Movement, 1932, Tirunelveli.

359. **Pillai, Sundaram, A.**, Joined and took part in Quit India Movement, 1942 Tirunelveli.

360. **Pillai, Swaminathan, S.**, Swadeshi Movement, Tirunelveli.

361. **Pillai, Thalavay, S.**, Joined the Movement in 1930, Civil Disobedience Movement 1932, Tirunelveli.

362. **Pillai, Thavakuninatha, M.**, Joined the Movement in 1930, Salt Satyagraha Toddy shop picketing, Foreign cloth boycotting, 1930-1932, Tirunelveli.

363. **Pillai, P.Thirukuda Sundaram**,Civil Disobedience Movement, 1931, Tirunelveli.

364. **Pillai, Thiumalaiandi, P.**, Joined the Movement in 1928, Civil Disobedience Movement in 1932, Tirunelveli.

365. **Pillai, Thirumalai Kozhundu, S.**, Joined the Movement in 1929, Salt Satyagraha and Civil Disobedience Movement 1930-32, Tirunelveli.

366. **Pillai, Umarubagam, V.**, Quit India Movement, 1942, Tirunelveli.

367. **Pillai, Varadaraja Perumal**, Anti-war Activities, 1940, Tirunelveli.

368. **Pillai, Velu**, Civil Disobedience Movement, 1931, Tirunelveli.

369. **Pillai, Venkatachalam.C**, Joined the Movement in 1930, Civil Disobedience Movement in 1930, Tirunelveli.

370. **Pichaiya alias Arumugam, V.**, Joined and took part in Liquor shop picketing 1942, Tirunelveli.

371. **Pitchumani, V.**, Joined the Movement in 1937-38, August Movement, 1942 Tirunelveli.

372. **Rajagopal, K.S.**, Joined the Movement in 1941, Individual Satyagraha,1941 August Movement, 1942, Tirunelveli.

373. **Rajagopalakrishnan, S.R.R.**, Joined the Movement in 1932, Individual Satyagraha, 1940-41, Tirunelveli.

374. **Rajagopalan, V.A.**, Joined the Movement in 1930, Civil Disobedience Movement 1931, Tirunelveli.

375. **Rajagopalan, N.**, Civil Disobedience Movement in 1930, Tirunelveli.

376. **Raja, Sankara**, Civil Disobedience Movement 1930,Tirunelveli.

377. **Rajasubramaniyam, S.**, Joined the Movement 1923, Salt Satyagraha, Toddy shop picketing and Foreign cloth picketing, 1930-32. Individual Satyagraha 1941, Tirunelveli district.

378. **Ramachandran, R.**, Quit India Movement in 1942, Tirunelveli.

379. **Ramakrishnan, I.V.**Joined and took part in the freedom Movement in 1940, Tirunelveli.

380. **Ramalingam, T.R.**, Joined the Movement in 1930, Toddy shop picketing, Foreign cloth boycotting and Civil Disobedience Movement, 1932, Tirunelveli.

381. **Ramakrishnan, V.**, Joined the Movement in 1930, Individual Satyagraha and August Movement, 1941-42, Tirunelveli.

382. **Ramalakshmi**, Joined the Movement in 1931, Toddy shop, Foreign cloth shop picketing, 1931-32, Tirunelveli.

383. **Ramamurthi, V.**, Anti-war Activities, 1940, Tirunelveli.

384. **Ramanujam, S.**,Joined the Movement in 1939, August Movement 1942 Tirunelveli.

385. **Ramaswami, A.**, Individual Satyagraha in 1941, Tirunelveli.

386. **Ramasamy, E.**, Joined the Movement in 1936, Individual Satyagraha, 1940 August Movement 1942, Tirunelveli.

387. **Ramasami, K.**, Joined the Movement in 1930, Individual Satyagraha, 1941, Quit India Movement, 1942, Tirunelveli.

388. **Ramasami, P.**, Joined the Movement in 1920, Took part in all Freedom Movement from 1920-42, Tirunelveli.

389. **Ramasamy, P.** Joined the Movement in 1940, August Movement, 1942 Tirunelveli.

390. **Ramasamy, E.P.**, Civil Disobedience Movement 1932, Tirunelveli.

391. **Ramasamy, R.**, Joined the Movement in 1930, Quit India Movement, 1942, Tirunelveli.

392. **Ramasami, S.**, Students Movement in February 1943, Tirunelveli.

393. **Ramasami Raja**, Joined the Movement in 1930, Cloth shop picketing, Toddy shop picketing, 1932, Individual Satyagraha, 1940, August Movement, 1942, Tirunelveli

394. **Ramudu, T.P.**, Joined the Movement in 1930, Took part in Vedaranyam Salt Satyagraha, 1930, Foreign cloth boycott, 1932, Individual Satyagraha 1941, Quit India Movement 1942, Tirunelveli.

395. **Rao, Narasimha, S.**, Civil Disobedience Movement 1932, Tirunelveli.

396. **Rao, Rajaram, N.**, Joined and took part in the Quit India Movement in 1942 Tirunelveli.

397. **Rao, Ramachandra, G.**, Joined the Movement in 1930, Civil Disobedience Movement 1941-42, Tirunelveli.

398. **Rathnasami**, A.Anti-war activities, 1940, Tirunelveli.

399. **Rathinavelu, P.C.**, Joined the Movement in 1936, Anti-war Satyagraha in 1941, Tirunelveli.

400. **Reddiar, V.P Jeyaraj**, Individual Satyagraha in 1941, Tirunelveli.

401. **Reddiar, Muthaiah, S.**, Individual Satyagraha, 1941, Tirunelveli.

402. **Reddiar, Paul,** Toddy shop picketing 1931, Tirunelveli.

403. **Reddiar, Perumal, S.**, Quit India Movement in 1942, Tirunelveli.

404. **Reddiar, Rajagopal, M.**,Joined the Movement in 1937.

405. **Reddiar, Ramasamy, K**, Civil Disobedience Movement, 1941, Tirunelveli.

406. **Reddiar,Sangarappa, S** , August Movement, 1942, Tirunelveli.

407. **Sachithananda Sivayogi, S.**, Took part in Civil Disobedience Movement in 1930, Tirunelveli.

408. **Sadamuni**, Joined the Movement in 1937, Individual Satyagraha, 1941 Tirunelveli.

409. **Sadamunikon, N.**, Joined the Movement in 1941, Civil Disobedience Movement, 1941, Tirunelveli.

410. **Sadhu Ganapathi Panthulu**, Swadeshi Movement, Tirunelveli.

411. **Saheed, V.**, Quit India Movement in 1942, Tirunelveli.

412. **Sakkiah, A.**, August Movement, 1942, Tirunelveli.

413. **Sambamurthy, R.**, Joined the Movement in 1931, Toddy shop and foreign cloth picketing, 1931-32, Tirunelveli.

414. **Samban, Marimuthu**, Anti-war activities, 1940-41, Tirunelveli.

415. **Sami, alias Muthukumarasami**, Joined the Movement in 1938, Individual Satyagraha 1940, Tirunelveli.

416. **Samynathan, P.**, Quit India Movement in 1942, Tirunelveli.

417. **Samy, K.T.**Individual Satyagraha, 1941, Tirunelveli.

418. **Samuel Yesudasan, M.**, Individual Satyagraha in 1941, Tirunelveli.

419. **Sangu Subramaniam**, Joined the Movement in 1930, Civil Disobedience Movement, Tody shop picketing and foreign cloth boycotting, 1930-32 Tirunelveli.

420. **Sankaradas, S.**, Joined the Movement in 1930 Civil Disobedience Movement, 1932, Tirunelveli.

421. **Sankarakrishnan, S.**, Joined the Movement in 1909, Tirunelveli.

422. **Sankarakuttalam, P.**, Joined the Movement in 1932, Civil Disobedience Movement, 1932-33, August Movement, 1942, Tirunelveli.

423. **Sankaralingam, S.**, Civil Disobedience Movement, 1930, Tirunelveli.

424. **Sankaran, K.**, Joined the Movement in 1941, Individual Satyagraha, 1941 Tirunelveli.

425. **Sankaranarayanan, M.**, Civil Disobedience Movement 1930, Tirunelveli.

426. **Sankar Keval**, Civil Disobedience Movement, 1932, Tirunelveli.

427. **Saravanaperumal**, Joined the Movement in 1942,Toddy shop picketing 1942,Tirunelveli.

428. **K.Sarma, T.K.** Joined the Movement in 1921, Non-cooperation Movement 1922, Nagpur Flag Movement, 1923, Foreign cloth boycotting, 1930 Tirunelveli.

429. **Seethai, K.**, Joined and took part in the National Movement in 1932 Tirunelveli.

430. **Sendil Arumugam, A.**, Civil Disobedience Movement, 1930, Tirunelveli.

431. **Seervai, Durairaj, R.**, August Movement 1942, Tirunelveli.

432. **Servai, Muthusami**, Civil Disobedience Movement, 1942, Tirunelveli.

433. **Servai, Ponnuswami T.**, Civil Disobedience Movement 1932, Tirunelveli.

434. **Servai, Ramasamy, U.**, August Movement in 1942, Tirunelveli.

435. **Servai, Velayya**, Anti-war activities, 1940, Tirunelveli.

436. **Sethuramalingam**, Civil Disobedience Movement, 1933, Tirunelveli.

437. **Seyril Francis, F.**, Individual Satyagraha Movement, 1940, Tirunelveli

438. **Shanmugam, S.**, Joined the Movement in 1936, Individual Satyagraha 1940

439. **Shanmugam, V.,** Individual Satyagraha, 1941, Tirunelveli

440. **Shanmugasundaram,** Joined the movement in 1930, Salt Satyagraha, Foreign cloth boycotting, 1930-31 and Individual Satyagraha, 1941, Tirunelveli.

441. **Shanmuga Sundaram, V.S.** Joined the Movement in 1921, Foreign cloth boycott, Toddy shop picketing, Civil Disobedience Movement, 1931-32, Tirunelveli.

442. **Shanmugavel Velar, T.,** Joined the Movement in 1920, Individual Satyagraha 1941, August Movement, 1942, Tirunelveli.

443. **Singh, Jagan,** Civil Disobedience Movement, 1932, Individual Satyagraha, 1941 Quit India Movement 1942, Tirunelveli.

444. **Sivathana Perumal, K.,** Civil Disobedience Movement, 1942, Tirunelveli

445. **Sivanu, P.,** Joined the Movement in 1931, Toddy shop and Foreign cloth shop picketing 1932-33, Tirunelveli.

446. **Sivaprakasam, N.,** Joined the movement in 1930, Foreign cloth boycott and Toddy shop picketing, 1932, Tirunelveli.

447. **Sivaraman alias Sailappa Pillai, V.,** Joined the movement in 1925, Civil Disobedience Movement, 1930, August Movement, 1942, Tirunelveli.

448. **M.A.Sivasankaran,** Joined the Movement in 1929, Foreign cloth boycotting, 1930-32, August Movement, 1942, Tirunelveli.

449. **Somasundaram, O.,** Civil Disobedience Movement, 1932, Tirunelveli.

450. **Somayajulu, N.,** Non-Co-operation Movement, 1923, Toddy shop in 1923 Initiated Arms Act Satyagraha in 1926, Neil Statue Satyagraha in 1927, Simon Commission boycott, Boycott of British goods-convicted, Organised Congress Socialist Party in Sankarankoil in 1936,Tirunelveli.

451. **Srinivasan,** Civil Disobedience Movement 1933, Tirunelveli.

452. **Srinivasan, A.,** August Movement, 1942, Tirunelveli.

453. **Srinivasan, P.,** August Movement in 1942, Assisted Student Movement, Engaged in prejudicial speeches, Tirunelveli.

454. **Srinivasan, P.,** Joined the Movement in 1940, Civil Disobedience Movement, 1940-42, Tirunelveli.

455. **Srinivasan, R.,** Joined the Movement in 1921, Civil Disobedience Movement 1932, Tirunelveli.

456. **Srinivasan, R.,** Anti-war activities, 1941, Tirunelveli.

457. **Subbaraju, P.,** Joined the Movement in 1930, Civil Disobedience Movement, Toddy shop picketing, 1932, Tirunelveli.

458. **Subbiah, R.,** Joined the Movement in 1938, Quit India Movement, 1942, Tirunelveli.

459. **Subbiah, V.,** Joined the Movement in 1922, Toddy shop and Foreign cloth picketing, 1932, Tirunelveli.

460. **Subbiah Bharathi, E.,** Joined the movement in 1926, Neil Statur Satyagraha, 1928, Tirunelveli.

461. **Subramaniyam**, Joined the Movement in 1930, Toddy shop picketing, 1930 Civil Disobedience Movement 1932, Anti-war propaganda,1940, Tirunelveli.

462. **Subramaniam, G.**, Joined the Movement in 1930, Foreign cloth boycotting, 1932, Tirunelveli.

463. **Subramanian, M.**, Joined the Movement in 1930, Civil Disobedience Movement 1932, Individual Satyagraha, 1941, Quit India Movement, 1942, Tirunelveli.

464. **Subramaniam, N.**, Joined the Movement in 1930, Salt Satyagraha, Civil Disobedience Movement, 1930-31, Tirunelveli.

465. **Subramaniam, R.**, Toddy shop, Foreign cloth Picketing 1932, Tirunelveli.

466. **Subramaniam**, Civil Disobedience Movement, 1930, Tirunelveli.

467. **Subramaniam, S.**, Civil Disobedience Movement 1932, Tirunelveli.

468. **Subramania Siva**, Joined Chidambaram Pillai in Tuticorin, and was wandering through the different places, lecturing on Swadeshi and Boycott, delivered series of lectures in 1908, inspiring people to discard foreign goods, launched the movement for Freedom in Dharmapuri and Tirunelveli.

469. **Sundaram, M.**, Civil Disobedience Movement in 1932, Tirunelveli.

470. **Sundaram, S.K.**, Joined the Movement in 1921, Civil Disobedience Movement, 1932, Tirunelveli.

471. **Swami, K.M.**Joined the Movement in 1939, Civil Disobedience Movement, 1940, Tirunelveli.

472. **Swaminathan, P.**, Joined and took part in August Movement, 1942, Tirunelveli.

473. **Swaminathan, S.**, Joined the Movement in 1931, Individual Satyagraha, 1941, Tirunelveli.

474. **Syed Ahmed Kabir, S.**, Quit India Movement, 1942, Tirunelveli.

475. **Thangasamy, A.**, August Movement, 1942, Tirunelveli.

476. **Thangavelu alias Velu Naidu,N.**, Civil Disobedience Movement, 1930 Tirunelveli.

477. **Thevar, Doraisami**, Anti-war Activities, 1940, Tirunelveli.

478. **Thevar, Easaki, E .**, Civil Disobedience Movement, 1932, Tirunelveli.

479. **Thevar, Gurusamy M.**, Joined the Movement in 1930, August Movement Tirunelveli.

480. **Thevar, Kannimaru**, Anti-war Activities, 1940-41, Tirunelveli.

481. **Thevar, Karuppiah, K.**, August Movement 1942, Sankarankoil taluk, Tirunelveli.

482. **Thevar, Karuppiah, R.**, Joined the Movement in 1933, Toddy shop picketing and Foreign cloth shop boycotting 1933, Tirunelveli.

483. **Thevar, Mariappa**, Joined the State Satyagraha, Movement in 1933, and August Movement, 1942.

484. **Thevar Muthiah, K.**, Joined and took part in the freedom Movement in 1942, Tirunelveli.

485. **Thevar Muthiah, C.,** Quit India Movement, 1942, Tirunelveli.

486. **Thevar, Pandara, L.,** August Movement, 1942, Tirunelveli.

487. **Thevar, Parama,** Joined the Movement in 1933, Toddy shop picketing and foreign cloth boycotting, 1933, Tirunelveli.

488. **Thevar, Paul alias Gajendra,** August Movement, 1942, Tirurelveli.

489. **Thevar, Petchimuthu.,** Joined the Movement in 1931, Foreign cloth shop picketing, 1932, August Movement, 1942, Tirunelveli.

490. **Thevar,Petchimuthiah,.,** August Movement, 1942, Tirunelveli.

491. **Thevar, Ponniah I.,** August Movement, 1942, Tirunelveli.

492. **Thevar,Ramanatha V.** , Individual Satyagraha, 1941, Tirunelveli

493. **Thevar, Ramiah, M.,** Joined the Movement in 1940, Individual Satyagraha, 1940, Tirunelveli.

494. **Thevar, Ramiah, R.,** Joined the movement in 1933, Toddy shop picketing and Foreign cloth boycotting, 1933, Tirunelveli.

495. **Thevar, V.Ramiah, V.,** Joined the movement in 1937, Individual Satyagraha, 1941, Tirunelveli.

496. **Thevar, T Rathinasabapathi,** Civil Disobedience Movement in 1932, Tirunelveli.

497. **Thevar, Sankaralinga, M.,** August Movement, 1942, Tirunelveli.

498. **Thevar, A.Seenivasaka, A.,** Joined the movement in 1930, Foreign cloth shop picketing, 1930 and August Movement, 1942, Tirunelveli.

499. **Thevar, Shanmugasundara,** Anti-war speeches, 1941, Tirunelveli.

500. **Thevar, V.Subramania,** Joined the Movement in 1930, Foreign cloth boycott, Toddy shop picketing and Civil Disobedience Movement 1931-32 Tirunelveli.

501. **Thevar, Sudalaiyandi, M.,** Joined the Movement in 1934, Civil Disobedience Movement, 1942, Tirunelveli.

502. **Thevar, Sundara, S.,** August Movement, 1942, Tirunelveli.

503. **Thevar, Thiruvu, V.,** Joined the Movement in 1939, No tax movement and August Movement, 1942, Tirunelveli.

504. **Thevar, Uthanda,** Anti-war activities, 1940, Tirunelveli.

505. **Thevar, Vadivelu, K.,** August Movement, 1942, Tirunelveli.

506. **Thevar, Vellai,** August Movement, 1942, Tirunelveli.

507. **Thirumalai, N.,** Joined the Movement and took part in Individual Satyagraha, 1941, Tirunelveli.

508. **Thirumalaiyandi, S.,** Joined the Movement in 1930, Foreign cloth boycotting, 1932, Tirunelveli

509. **Tirumalai Kolandai,** Civil Disobedience Movement 1930, Tirunelveli.

510. **Tiruvadaiyan, S.M.,** Joined the Movement in 1929, Toddy shop and Foreign cloth shop picketing. 1931 and Individual Satyagraha, 1941, Tirunelveli

511. **Thomas Ponniah, S.,** August Movement, 1942, Tirunelveli.

512. **Thondaman, Ramasami,** Joined the Movement in 1930, Toddy shop picketing and Foreign cloth shop picketing 1930-31, Tirunelveli.

513. **Ulaganathan, M.R. R.,** Joined the Movement in 1932, Foreign cloth shop picketing, 1932, Quit India Movement, 1942, Tirunelveli.

514. **Vaithilinga Sabiah,** Civil Disobedience Movement, 1931, Tirunelveli.

515. **Vanchinathan alias sankara Iyer, R.**, was a member of the Secret Society called "Bharata Mata Association" organised by Nilakanta Brahmachari, Took his training in revolver practice from V.V.S.Iyer, one of the young men of the revolutionary or terrorist group whose aim was working for the total extermination of the English from Bharat. Shot and killed the Collector, Mr.Ashe in Maniachi station, Tirunelveli.

516. **Varadarajaperumal**, Quit India Movement, 1942, Tirunelveli.

517. **Vavai, A.**, Civil Disobedience Movement, 1932, Tirunelveli.

518. **Veerabahu, M.C., C.**, Anti-War Satyagraha, 1940, Tirunelveli.

519. **Veerabahu, V.**, Joined the Movement in 1931, Civil Disobedience Movement 1932, Tirunelveli.

520. **Velapandian**, was one of the accused in the attack of Keeranur Salt Factory, 1942, Tirunelveli.

521. **Velayutham, K.**, Joined the movement in 1929, Foreign cloth boycotting, 1930 August Movement 1942, Tirunelveli.

522. **Vellalar, V.Mookiah, V.**, Joined the Movement in 1914, Indiv idual Satyagraha, 1941, Tirunelveli.

523. **Veluchami, K.**, Joined the Movement in 1941, Individual Satyagraha, 1941, August Movement 1942, Tirunelveli.

524. **Venkatachalam, C.N.**, Quit India Movement, 1942, Tirunelveli.

525. **Venkatachari, V.S.**Joined the Movement in 1937, Individual Satyagraha, 1941 Tirunelveli.

526. **Vinayagam, M.**, Joined the Movement in 1928, Foreign cloth boycotting, 1929 Salt Satyagraha, 1930, Toddy shop picketing, 1931.

527. **Yegneswara Sarma, P.**, Nagpur Flag Satyagraha in 1925, Salt Satyagraha in 1930, Civil Disobedience Movement, 1932, Quit India Movement, 1942 Tirunelveli.

Source: **Who's Who of Freedom Fighters (Tamilnadu) Vol.III, Govt. of Tamil Nadu, 1973, pp.53-158.**

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37. *Ibid.*

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CHAPTER - 3

PEOPLE

Religion and Caste

How religion originated among primitive people is a subject of endless discussion at the hands of anthropologists and philosophers.[1] Some hold that fear was a basic factor in generating the religious impulse.[2] But, *a few anthropologists oppose this view and content that it is the inexplicable and un-understandable phenomenon pertaining to human life which provoked man to imagine the existence of a mysterious supernatural force and led to a belief in the omnipresence of something which is inscrutable.*[3] This led to animism in some cases and naturism in others and invariably to both.

There is an unquestionable evidence that by the Sangam age itself the fusion of Dravidian and Aryan religious practices had commenced.[4] It is the incorporation of the three elements pre-Dravidian, Dravidian and Aryan that has resulted in the Hinduism of Tamil nadu. The Brahmi inscription found in the caves of the Tirunelveli and other southern districts of Tamil Nadu, reveal that Jainism and Buddhism entered the Tamil country before the 2nd century B.C. The contact of the South India with Islam is much older than that of the North.[5] Kayalpattinam in the composite Tirunelveli district was one of the prominent Muslim settlements in Tamil Nadu dated back between 12th and 14th Centuries. A persistent and doubtful tradition ascribes the introduction of Christianity in South India to St.Thomas in the first century. A.D.[6]

As in other parts of Tamil Nadu, Hinduism, Christianity and Islam are the major religions professed in Tirunelveli district. Followers of Jainism and Buddhism also live in the district.

HINDUS

The evolution of the religious beliefs and practices may be traced back to the Sangam Age or even earlier. Ancestral worship of a limited type is known to have flourished from the early times. Among the early Tamils the practice of erecting memorial stones (Nadukal) and hero stones (Virakkal) had appeared and it continued for quite a long time even after the Sangam Age, down perhaps to about the 11th century A.D. Early Tamil Grammar work, Tholkappiam speaks of six successive stages in the erection of hero stones. There is every likelihood that the practice of erecting hero-stones had commenced much earlier than the age of Tolkappiam.[7] Besides hero stones, people of the Sangam Age believed in the existence of ghosts, and the concept of heaven and hell.

In this connection, it is important to observe that, associated with the phenomenon of death, certain deities have been worshipped by Tamils or to be more accurately by the lower middle class of the society.[8] The Sudalaimadan cult is still popular in the rural areas of Tirunelveli district.

Animism among the early Tamils is also found reflected in certain funeral rites. The practice of burying the principal belongings of the dead along with them in Urns or open sites has been a custom among the Tamils, too, for ages. Adhichanallur in Thoothukkudi district not far away from the borders of the Tirunelveli district presents perhaps the most unique burial site in pre-historic India. It reveals how, inside as well as in the proximity of the Urns, iron implements, bronze ornaments and utensils as well as Gods diadems and mouth-pieces have been unearthed.

Worship of Nature also existed side by side in the ancient Tamil Nadu though there were contrary views among the scholars which ask whether Nature or idol worship was the earliest.

Some of the emergence of the worship of trees and animals, there appeared the adoption of totemism. There is unmistakable evidence of the use of the totemic symbols in the district. It is well known that the Pandyas had adopted the carp, Cholas the tiger and the Cheras the bow as their emblems.

Among the Tamils, as among a vast body of Hindus all over India, the phallic worship of Siva has been popular over the ages. But it is by no means easy to determine when it appeared in the Tamil country. In due course the worship of the personified gods in the shape of images emerged among the early Tamils. At the outset, each physiographic region attached a special importance to a particular deity. As detailed in Tholkappiam, every region had its own principal deity. For example, it assigns Lord Muruga to Mountain regions, Lord Vishnu to Forest regions, Lord Indra to cultivable Greens and Lord Varuna to coastal regions. Though the desert region and its deity has not been mentioned in Tholkappiam, other literature mentions Goddess Kotravai as the deity of the desert lands. It is significant that while the name *Siva* as such to the best of our knowledge, does not occur in any of the Sangam works, it appears in Silappathikaram for the first time.

The prevalence of phallic worship and its association with Siva on the one hand and the connection of Sudalaimadan with the burying ghat and Siva's role as the God of destruction on the other, all suggest that the final concept of Siva in the Hindu Pantheon is the product of a prolonged process on conglomeration.[9] The popular pantheon included deities like Muruga, Siva, Vishnu, Indra, Krishna and others.

Hinduism was the prominent religion professed in the Tamil country though it tolerated Buddhism and Jainism. But soon, a great change came and the people began to entertain the fear that the whole land was going over to Jainism and Buddhism. At any rate worshippers of Siva and Vishnu felt the call to stem the rising tide of heresy. The growth, on the one hand, of an intense emotion, bhakti to Siva or Vishnu and on the other an outspoken hatred of Buddhists and Jainism are the Chief characteristics of the new epoch.[10] The outcome was the emergence of religious saints and their followers who traversed the country many times over, singing, dancing and debating all their way. This great wake of religious enthusiasm attained its peak in the early seventh century.

Later tradition counted sixty-three Nayanmars on the Saiva side. They authored numerous hymns in praise of all the gods and temples of Tamil Nadu. These hymns have been compiled into Devarams and Tiruvasakam. In Tirunelveli district, the presiding temple of the district (i.e.) the Nellaiyappar temple and temples in Courtallam have been versified by the Nayanmars.

The Vaishnavite wing of the movement is represented by twelve Alwars of whom Periyalwar and his daughter Andal belonged to Srivilliputhur, now included in Virudhunagar district, in the neighbourhood of Tirunelveli district and Nammalwar was a native of Alwar Tirunagari (earlier called Kurugur) of the present Thoothukkudi district.

Other Hindu leaders who were the exponents of the religion and who were followed and worshipped by the Hindus of all the districts of the Tamil Country were Nathamuni Nambiandar Nambi, Sankara, Ramanuja, and Alavandar.

The Tirunelveli district, a part of the Pandya country, was ruled by Hindu Kings, though had shown great enthusiasm in promoting Hinduism, tolerated the other religions also inspite of a few noticeable religious favouritism.

Under the Nayaks' rule, all types of religions found encouragement and most of the famous temples of South India were either built or renovated during this period particularly by the addition of large gopuras, entrance towers corridors and mandapam. These temples include the Nellaiyappar temple, Krishnapuram temple, Courtallam temple, Papanasam temple, etc. in Tirunelveli district.[11]

Population

The 1991 census, the first census after the formation of the district, has returned that the religions professed in the district are Hinduism, Christianity, Islam, Jainism, Sikhism and Buddhism. The following Table,

extracted from the Census Report, shows the total number of males and females of different religions.

	Hindus.	*Christians*	*Muslims*	*Jains*	*Sikhs*	*Buddhists*
Males	9,97,595	1,21,277	1,10,489	129	49	1
Females	10,25,026	1,31,453	1,15,141	92	19	1

The Population Tables of the District extracted from the Census Reports are given in *Appendix - 1.*

Castes in the District

The reference to the fourfold division of castes (i.e.)Brahmins, Kshatriyas, Vaisyas and Sudras, in Tholkappiam stands as an evidence for the existence of caste system in Tamil Nadu right from the Sangam period.[12] But, as far as Tamil Nadu is concerned there is not a separate community of Kshatriyars. Tolkappiar equates the word *Anthanar to* Brahmins, *Arasar* to Kshatriyas, and Vellalas to Sudras though he retains the word vanikar (*Vaisyars*) as it is. K.K.Pillay is of the opinion that the implied identification of the *Sudras* with the Vellalas is inexplicable as will be shown presently.[13] The Vellalas alone were not Sudras but numerous other social groups left unspecified. Apart from *Tholkappiyam and Paripadal, Nanmanikkadigai* also states that the Vellalar constituted primarily the agriculturists including land owners and peasants. They had marital relationship with the Pandyas, Cheras and Cholas, but that was because of their high social position among the non-Brahmins.

In the pre-historic epoch itself, certain tribes were considered to belong to the proto-Austroloid, Negroid and Naga Stock. Their descendants were later known by various names, such as Vettuvar, Irular, Villiyar and Pallar. Perhaps the Tudiyan, Panar, Paraiyar and Kadambar might also have belonged to the class of original tribes.

Sometimes after the advent of the Dravidians the regional divisions based on the physiographic features appear to have emerged. Those who inhabited the *Palai, Kurinchi, Mullai, Marutham and Neydhal* came to be known respectively, as the Maravar, Kuravar, Ayar, Ulavar and Paradavar. The division of people was not rigid and hence, one group could become migrated to other physiographic division and called by the profession of the land.

In course of time, therefore, the rise of new occupation must have resulted in the emergence of new divisions of society. Thus, in the Sangam Age itself besides the tribes and the regional groups mentioned above, there appeared the purely occupational divisions like the Kaikolar, Kammalar,

Thunnakkarar and numerous others. Among those pursuing the age old occupations, two sub-divisions emerged. Thus, for example, distinction arose between the Veduvar and Kuravar, the former obviously refers to hunters and the latter to hillmen pursuing more docile occupation. The Sangam works refer to the following groups: Alvar, Idayar, Iiyavar, Umanar, Ulavar, Eiriyar, Kadambar, Kammiyar, Kalamar, Kuyavar, Kuravar, Kurumbar, Kuttar, Kollar, Kosavar, Tachar, Tudiyar, Terpakar, Tunaiyar, Paradavar, Panar, Pulayar, Porunar, Malavar, Vadugar, Vannar, Vanigar and Vedar. They were all occupation oriented divisions. But it is important to observe that so far our knowledge goes, there was no inhibition among them in respect of inter dining. Restriction on inter marriage between the various castes, however, seem to have gradually emerged even during the Sangam Age. All the classes worked harmoniously. Men and women enjoyed equal liberty.

While this development was taking place, the fourfold system of the Aryans was attempted to be foisted. All the Brahmins were not Aryans. Many people in Tamil country merged themselves with that group. But, neither the Kshatriyas nor the Vaisyas were organised on a clear cut basis. But, numerous sub-castes had emerged even before the advent of the Aryans and that process continued through the ages.

While out of this conglomeration, there developed the later caste system with the ever-increasing sub-castes on the one hand and the growth of strict observance of caste ongulations and inhibitions on the other, the question arises whether hereditary caste system existed even during the Sangam Age. The available references suggest that the occupational division had already become hereditary.[14] Perhaps a large measure of laxity existed in the Sangam Age and there is no doubt that the stiffening of the hereditary basis increased with the lapse of time.

The emergence of the distinction of superiority among the various castes also is found. Though the Brahmins enjoyed a social pre-eminence, the others were not slow in gaining social superiority. The appellations of *Ishippapplan* and *Ishilivan* applied to people of low born castes in the early Sangam works, are indubitably expressive of this feature.

The earliest archival source which furnishes the names of castes that existed in the composite Tirunelveli district by 1800[15] is the *Dehazada and Population Tables of the different Talooks in the province of Tirunelveli*[16]. The source is an original record prepared meticiulously by the local officials in the services of the East India Company for their revenue and military administration of the district. The record is a statistical hand book of the district containing umpteen number of details including the castes and population.

The Hindu castes mentioned are, "Smarta Telugu Brahmins, Shree Vyshnavas, Mardivas Sadvati, Maharastra Brahmins, Cunnada Brahmins and Shola Brahmins, Shiva Bhakthas (Brahmins), Vishnu Bhakthas (Brahmins) Vaduga Rajahs, Gosamys, Muddabadi gauny Pandaram, Gurukkal or Oduvar, Malaikatti Pandaram, Aundy thathan, Vyravar, Ochen or Molakkaran, Dassy or dancing girls, PandyVellalar,Caurcat Vellalar, Soshiya and Tuluva Vellalar, Thondaimandalathu Mudali, Vudaloogu Naicken, Cowra, Vallial Chetty,Yeddian and Germa yeddian, Vullay yeddian, Yella vanian, Patnoolcar weavers, Kycolar weavers, Condian Cotay Maravars, Cottaly Muravan, Collinducutti Maravan, Agambadiar, Totier, Reddiar, Vatuven and Anuppen, Panan, Moochien, Cutticaren, Punnishaven, Aut Vanian, Chalupen, Pandalar or artisans, Cuddchelcaren, Coshavan or potter, Ambattan or barber, Vannar or Washermen, Shayacaren or dyers".

The Mohammedan Castes detailed in the record are Pattany or Tulukkan and Lubbai or Shonagar. The people and their castes who had embraced Christianity has also been given. As per the rcord, people of the Rajahs, Vellalars Chetty, Murravan, Vanian, Purravan and Shanar Castes had embraced Christianity.

The Hindu castes of Ilavar, Shanar, Chunnam, Purravan Ooremelcaran, Otten, Chowlecaren, Cuddan and Coravan have been listed as inferior ones in the record and the castes of Pallar, Vulluven, Pariar, Shemman or Chukkler and Pooray Vannar have been given as Hindoo low castes. Paliars have been mentioned as the hill tribe of the district.

Besides the enumeration of castes in the district, the social condition that prevailed in late 18th and early 19th centuries is also to be read between the lines of the Report. Passing of two centuries had witnessed many social changes both spontaneous and by the enactment of laws to remove the evils of casteism. Though the legislation, reforms and social movements aim at forming a casteless society, caste still exists in disguise of fundamental rights.The details of the Castes are given in the Gazetteer for statistical, demographical, cultural and documentation purposes.

Though the 1833 record speaks about 70 castes, the Census of 1871, the first organised Census of India, has returned only sixteen Hindu Castes in the district. They were Brahmins, Kshatriyas, Chetties, Vellalars, Idaiyars, Kummalars, Kanakkan, Kycolan, Vannian, Kosavan, Sathani, Sembadavan, Shanars, Umbattan, Vannan and Parayar.[17] The reason for the decrease in the number of castes might be due to the inclusion of the tiny subsects under the major division to which they belonged. The 1871 Census Report says that the Protestant Mission succeeded in converting a considerable number of Shanar community to Christianity and the Catholic Mission was popular among the Paravas and the fishermen.

The 1881 Census had recorded about17 Castes. They were Vaduga (farmer), Vaniyan, (oil monger), Chetty (merchant), Balija (merchant), Kaikolar (weaver), Brahmin (priest/landlord), Pariah (farmer/labourer), Shanar (farmer/toddy tappers), Marava (farmer), Kusavar (potter), Vellalla (farmer), Palla (labourer), Idaiyan (shepherd), Ambattan (barber), Vannan (washermen) Satani (temple servant) and Kammalar (artisan).[18]

At the Census of 1901 as many as 65 distinct castes were enumerated in the district and the principal (in population) among them were Brahmins, Paravars,Shanars, Maravars, Vellalars, Kammavan, Iluvar and Katasahs.[19]

The principal Castes in the district as given in the 1961 Census Report are Vellalas, Nadars (Shanars), Maravars, Kammavars, Kambalattars, Reddis, Brahmins and Idayars orYadavas.

Major castes in the District*

India is a secular country. But brief accounts of the existing major castes[20] from the historical, sociological and anthropological points of view have to be given as religion and castes still remain as an important and basic cultural character of the people.

VELLALAS

In the Madras Census Report 1871, the Vellalas are described as a peace loving, frugal and industrious people and in attention, they have no equals. The 1891 Census Report describes the Vellallas as the great farmer caste of the Tamil Country and they are strongly represented in every district. The word *Velllalan* is derived from *Vellam* (water) and *aanmai* (Management) meaning cultivation.[21] Tolkappiam, a Sangam grammatical work mentions *Vellallar* as one of the four divisions of the Tamil society[22] Some scholars are of the view that Tolkappiar substitutes *Sudras* to *Vellalars*. It is also noted that at the time of 1871Census, some Vellalars claimed that they had been seriously injured in reputation and handled with great injustice, in being classed as *Sudras* by the Municipal Commissioner of Madras in the classification of Hindus under the four great divisions ((i.e.) Brahmin, Kshatriyas, Vaisyas and Sudras. In their petition to the authorities, it was stated that they came under the *Vaisyas* not *Sudras*.

V.Kanakasabhai in his classification of the Tamil Society in the first Century A.D. states that , the *Vellalas* were the *Arivar* or *ulavar* or farmers.

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*The portion on the various communities of the District was written by Dr.S.D.Lourdu, Director, Folklore Resources and Research Centre, (FRRC), St.Xavier's College, Palayamkottai exclusively for the Gazetteer.

The Arivars were ascetics but of the men living in society. They formed the nobility or the landed aristocracy of the country. They were also called Vellalars, (lords of the flood) or *Karalars*, (lords of the clouds). The titles express their expertise in controlling floods and in storing water for agriculture purposes. The Chera, Chola and the Pandya Kings and most of the chieftains of Tamilakam belonged to the tribe Vellalas. The poor families of Vellalas who owned small estates were generally spoken of as the Keelkudi - Ulavar or *the fallen Vellalas*.[23]

In the district, mostly all the taluks have Vellala population. An English Collector has remarked about the *Vellalas* of the district in 1872 as follows:-

"They do not now confine their attention to agriculture but, wherever money is to be made or power to be had, the Vellalas are sure to be the foremost. Astute calculators and enterprising trades men, they are well adapted for managers, brokers and agents and as Government servants they fill the Courts and cutcheris and have almost monopolised the office of the village accounts". [24]

In the late 17th and the early 18th centuries, the Vellalas had played the role of the political advisers to the Palayakars of Sivagiri and Panchalankurichi. They are now found in all walks of life.

In the district, the caste has been divided into three endogamous divisions, Viz., *Tondaimandala Vellalas, Vellalas* and *Karkathars.* The Tondaimandalam Vellalars of the district are popularly known as *Pillamars* or *Vellampillai*. In the past, the Tondaimandala Vellalars suffix their names with the title *Mudaliar* and Karkattars and other Vellalars as *Pillais*. This practice is dwindling down mostly among the younger generations perhaps in response to the national policy of the formation of casteless society. Like Brahmins, they run vegetarian eating houses in all the important towns and villages of the district. In social status, they were considered next only to the Brahmins. Orthodox Vellala widows are not allowed to remarry.

The Tondaimandalam class divides itself into two endogamous sections, one emigrated to the district from the neighbourhood of Kancheepuram and the other from Tulu Country, called *Tuluva Vellalas*. The Tondaimandalam Vellalas or Mudaliyars are the Saivites and Tuluva Vellalas are Vaishnavites. The Tuluva Vellalas also have traced their origin of their settlement to the Nayaks rule in Madurai saying that their ancestors formed part of the retinue of Tirumalai Nayak.

H.R,.Pate records that the *Karkattars* form a small community possessed of a strong Corporate spirit and proud of their generally admitted superiority to the great mass of the Vellala population which is comprised in

the third division. They are found in small colonies in almost all parts of the district numbering about few thousands. They have a tradition that they migrated from a northern country called Karaikadu.[25]

KARKATHA VELLALAR

Karkatha Vellalas are otherwise called as Karakattu Vellalas or Karikattu pillaimar. They also adopt the title *Pillai*. The literal meaning of the word *kar* means clouds or rain. *Kaatha* means one who has protected. In the view of the other caste people, they are simply viewed as Vellalas, and could not be ascribed as to which sub division they belong to. P.T.Srinivasa Ayyangar says that Vellalars are the rulers of the floods - the method of carrying the life giving water to the fields. Beyond the drought of the river had lived the Karkathar the ruler of the clouds - those who stored the rain water in tanks and conveyed them to fields and through the irrigation channels.

They are Tamil speaking people and use Tamil script both for reading and writing. Some of them are conversant in English too. The Karkatha Vellalas are treated as socially and educationally forward community. As to the subcaste *Karkatha vellalas*, the following legend is stated. *Karkatha* means those who saved or protected the clouds. In the reign of Ugra Pandya, there was a terrible famine which continued for twelve years and so the king being angry, imprisoned all the clouds for their negligence of duties. Indra, the god of clouds approached the King and requested him for the release of the clouds., but he refused to comply with until somebody stood as a guarantee for their faithful performance of their duty of sending rain to his kingdom. Some Vellalas came forward at this juncture, safeguarded the clouds and hence, they are called Karkatha Vellala or Karakattu Vellala. Thus, they claim that they are the ones who controlled the clouds. The Vellalar claim higher ritual rank over other cultivating castes like the Maravar.

They also claim that they are the descendants of the Ega Veeran (found in Thiruvilayadal puranam). They also claim that they are the descendants of Vadamalaiyappan who ruled the area, as the royal representative of Nayak Kings. A few felt that they are not withstanding the legends about their origin from a place called Karaikadu (W.Francis) which is situated in the Kancheepuram district of Tamilnadu.

There are some minor variations of customs found to be present among the Karkatha Vellalar who are distributed in the various other districts of Tamil Nadu.

Some are well educated and employed in government service. Some are merchants, shop-keepers, etc., but the greater part of them are the peasant proprietors of the soil, and confine their attention to cultivation.

Bio-Anthropological Information

Bio-anthropological information is lacking with respect to the Karkatha Vellala community. Till now no study related to their morphological traits, serological traits, haemoglobin variants, dematoglyphic traits, nutritional status, etc. have been made.

Social Divisions, Hierarchy and Stratification

The Karkatha Vellalar claim that they are the only caste group which is possessed with gotras on par with that of the Brahmins in Tamil Nadu. This community is divided into a number of gotras which act as regulatory mechanism for contracting matrimonial alliances. These gotras purely function as social differentiation mechanism. However, the Karkatha Vellala identify the other people living in Tamilnadu on the basis of territory. Mostly each district of Tamil Nadu is considered as a distinct territory. Though many marriages are contracted within the limits of a particular territory, there is no bar in securing spouse from other territories.

The Karkatha Vellala presume that they are socially superior to the other communities. They also consider that the Saiva Vellala are socially a little higher than them and all the other remaining Vellala groups are more or less equal to them. They refuse to take cooked food or water from other castes excepting from the Brahmins and Chettiars. But, today educated Karkathars are dining in the houses of their friends belonging to other castes.

Traditionally, the Varna order of hierarchy is accepted by the Karkatha Vellalar. But, nowadays, there is a strong aversion with regard to the Varna concept found to be present among the Karkatha Vellalas.

Institution of Marriage

Monogamy is the most common form of marriage. They adopt caste endogamy and gotra exogamy. Marriage among the relatives is most common. But, currently there seems to be a change in this regard. They prohibit marriage with parallel cousins. Cross-cousin marriages are preferred. The girls are married after attaining puberty that is usually after 16 years of age. The boys get married between the age of 22 and 28 years. The *thali*, *metti* and *kumkumapottu* are the marital symbols.

Divorce and re-marriage are not common among them. Dowry is a recent phenomenon slowly creeping into the Karkatha Vellala community.

Family

Mostly, nuclear family is found among the Karkatha Vellala. The young ones are expected to give respect to the elders. They maintain joking

relationships with the cross-cousins. The property is inherited through male line (patrilineage).

Status of women

Though the principle of patrilineage is in practice, the recent legislations in Tamil Nadu have paved way for matriliny too. Usually the women are debarred from taking any activities in the fields of economy and polity. However, the women are having higher say in any decision making within the family.

Food and food habits

The Karkatha Vellalar are traditionally pure vegetarians. Among them, the concept of vegetarianism is linked with the principle of hierarchy. But, nowadays, among the youngsters belonging to this community, the habit of consuming non-vegetarian food has slowly coming up. Under no circumstances, beef is consumed. The staple food of Karkatha Vellalar is rice. They consume all varieties of pulses, vegetables, fruits, milk products, soft drinks, etc. In almost all the life cycle ceremonies and festivals vegetarian food items are served in the feast. Serving of non-vegetarian food is strictly prohibited. They use all kinds of vegetables and fruits. There is no restriction in using milk and milk products.

Life cycle rituals

After child birth, a purification ceremony is performed followed by naming ceremony, after a month. Admitting the children in school is also celebrated in a grand manner. In all the above three occasions, children are clothed with new dresses and sweets are distributed to all the participants.

Among the Karkatha Vellalar a peculiar ceremony called *vilakkidu kalyanam* or the auspicious ceremony of lighting the Kuthuvilakku (lamp) is performed for the girls in the seventh or ninth year or later but, before the marriage. This ceremony either precedes or follows the girls puberty ceremony. It is usually held in an auspicious *muhurtham* day soon after the girl completes her 7th or 9th year of age. The age (number of years) should be in odd number (like 5 years, 7 years, 9 years, etc.) Nowadays, instead of conducting this ceremony individually for each girl, a collective ceremony is being held. It is being held every year during the first day of the Tamil month *Thai* (in January). The ceremony consists of worshipping the lord Ganesa and the Sun at the house of their parents. Then the girl lights a lamp made of brass. Mother's brother gives her necklace or nine gold beads and ten red coral. It is tied around the neck of the girl by her mother's brother. In the absence of the maternal uncle, (i.e., mother's brother) the tying of the necklace is performed by the mother's father or mother's mother or mother's brother's wife. A new cloth (saree) is also

presented to her by her mother's brother. All the relatives who are invited to the function present gifts to the girl. This necklace is also called *Navamalai.* The girl must wear the necklace until her marriage. In many cases, the women of this caste wear this ornament which is called *kodichimani* (hooked jewel) even after marriage. At present, a portion of the *navamalai* is linked with the actual *thali* and worn by the women even after the marriage. Normally, the Vilakkidu kalyanam ceremony is conducted by a Brahmin priest. Child marriage was in vogue in the olden days. The Karkathars dispose of the dead by cremation.

Economic activities

Their traditional occupation is agriculture. Now, many of them are working in government and non-governmental undertakings and practice learned professions like law, medicine, engineering, teaching, etc.

Social control

In each village, where Karkatha Vellalas are residing, some of the elders constitute themselves an informal committee which look into the matters of social control. They have founded a state level Karkatha Vellalar Association. Adultery is punished; those who indulge in adultery continuously are excommunicated.

Religious attributes

The Karkatha Vellala community profess the Saivism. These people have under their control many Saiva Mutts in Tamil Nadu. The priests in these mutts are highly respected and consulted on important issues by the members of this community.

Inter- Community Linkages

The Karkatha Vellalas maintain cordial relations with the other communities. Normally they do not accept cooked food from the other backward and Scheduled Castes. However, the latter accept the cooked food from the former. Intercaste marriages are strictly prohibited. Public facilities like well, school, cremation, etc., are shared in common with the other communities.

PILLAIMAR

Most of the Vellalas in the district, belong to the class *Pillaimar*. Broadly speaking, they fall into two main sections, viz., Vegetarian Pillamars, popularly called *Saivaal* and others who eat non-vegetarian food. There are neither inter-marriage nor inter-dining between the two sections of the Vellalas. It was recorded in 1920s that people who were not strict vegetarians in their food habits would not be offered food in the homes of the *Saiva Pillamars*. The strangers would be admitted into the house only

if they could convince that they were strict vegetarians. The passage of time has seen certain flexibility in the custom and now many families of Saiva Vellalas, though abstain from eating meat and other non-vegetarian food, allow their friends inside their homes even if they are non-vegetarians and extend their hospitality.

BRAHMINS

Brahmins, as in other parts of the State, form the priestly class. Of them, Saiva Brahmins or Saivites are numerous and found throughout the fertile part of the district especially in Ambasamudram, Tirunelveli, Cheranmadevi and in Sengottai taluks in large numbers. They are living in large numbers in the villages and towns situated on the banks of the Tamiraparani.

There are four divisions of Brahmins, each one following one of the four Vedas.The followers of *Rig, Yajur, Sama* and *Atharvana vedas* are called as *Sastrigal, Pattars, Ayyars* and *Kanabadigal* respectively. The followers of Sama veda and Yajur veda are numerous in number. Madvas, Gujarathis, Marathis, Telugu and Kannada speakers- migrated in to the district as the administrative agents in the expanding Vijayanagar imperial domain.

Vishnu Brahmins or Vaishnavites or Aiyangars are found in the surrounding of the Vishnu temples in Nanguneri, Tirukkurungudi and Palayamkottai.

The Brahmins in the district are mostly land owners. They are an enterprising community and the high social status they enjoyed in earlier days helped them become a progressive community. Only a few Brahmins now eke out their living by priesthood. The Brahmins called *pattars* can perform pooja in all the temples dedicated to the deities, but the Murugan temples are relegated only for them. Aiyangars are the only people who are still having the right to perform pooja at Vishnu temples. In the past, the right to become a priest in the temple was hereditary. Now there is a legislation in Tamil Nadu that suitable person from any community could become a temple priest. The priests are getting salaries according to the income of the temples.

Majority of the Brahmins are engaged in white collar jobs such as lawyers, doctors, teachers, Bank officers and Government servants.

Child marriages, once prevalent among the Brahmins, is totally absent now. Normally, the Brahmin widows are not allowed to remarry. The practice of dowry or *varadakshinai*, though prevalent in other communities, is enforced in Brahmin community with much strictness. Brahmin girls

especially of the middle and lower classes, unlike the olden days, seek profession and employed in various jobs in public and private sectors. This is to a certain extent forced on them on account of huge sums of dowry that they have to give for getting married. Not only that, because of economic conditions most of the Brahmin families prefer brides, who can also become an earning member. Though they are building new types of houses some of them are still living in agraharams around the temples. Because of the change in agricultural pattern most of the Brahmins have migrated to large towns in other parts of India and abroad. They have sold their lands and houses to the non-brahmin backward and forward communities.

Among the Brahmins, Pattars will marry the Iyer girls; but, not vice-versa.There are cases of intercaste marriages among the employed Brahmin women or men.

Life cycle ceremonies

The pregnant woman will be invited to the natal house at the fourth month of gestation. When she is returning to her husband's house in the fifth or sixth month, new clothes will be given to the husband and to the would be mother. The saree, jacket and other dresses will be in black colour. This is called as *Karuppuk Koduthal*. *Seemantham* or *Valaikaappu* will be performed in the seventh or eighth month of first pregnancy. This ceremony is performed by the *vedhiyars* who are well versed in Vedic hymns. This ceremony will be performed by placing a *Kumbam* in which betel leaves and coconut will be used to close the mouth. *Agni homam* is also conducted during this ritual for which nine types of woods are used as fuel (Mango, Peepul, Banyan, Fig, Valli, Naiyurivi, Karungali, Sandal and Vilvam). After this, a saree of 18 yard length will be given to the pregnant woman. The *vedhiyar* who performs the ritual will give a banyan tree bud which will be crushed by a young non-consummated girl. This bud will be placed in the saree and a drop will be poured in each nose. This is called *muukku pilithal.*

Upanayanam

The ceremony for wearing of the sacred thread or *Upanayanam* is conducted at the age of eleven or thirteen for the male. Three strands will be worn by the boy from left to the right side.

IDAIYARS OR KONARS OR YADAVARS

The people called Konars or Idaiyars are found in large numbers in the canal fed area of Tamiraparani, Nanguneri, Veeravanallur and Sengottai taluk. Paalidaiyar, Sivikai Idaiyar, Pasikatti Idaiyar, Valai Idaiyar, Karaiyalar and Nambi Idaiyar are some of the divisions in this caste. Some of them

want them to be called yadavas which is a northern term. *Das* is another suffix which they attach after their personal name.

Palidaiyars are cattle breeders and agriculturists, also called as *Mottai Idaiyar*. Sivikai Idaiyars are considered as palanquin bearers in the past. Valai Idaiyars are Telugu speaking people with the profession of selling *navathaniyam (nine kinds of grains)* in the olden days. Karaiyalars are one among the Idaiyars who have settlled in Sengottai area. They are considered to be migrated from Seerkazhi. Today most of them have become traders of cloth and grocery. Nambi Idaiyars are small in number living around Tirukkurungudi.These people are vegetarians.

The differences among these groups of people are only in social and ritual status. Divorce and remarriage are permitted among some of these sects. Following the practice of conducting the marriage with Brahmin *prohit* is considered as a high status symbol.Vegetarian food practice is also deemed as a symbol of superior position. Another custom which differentiates these people is the practice of both the mother and father pouring water to the grooms' father and mother when giving their daughter in marriage. In the other group only the father will pour water when giving his daughter in marriage. Yet another difference is marrying the sister's daughter and not marrying the sister's daughter.

Upto 1942, the Idaiyars of Reddiyarpatty and Mulaikkaraippatty area were under the control of the Reddiyars of that part of Tirunelveli district. They served the dominant Reddiyars as carriers of their dead bodies. In 1942, they revolted against this practice for which they were not allowed to graze their cattles in the lands of the Reddiyars. Further the Reddiyars, as an act of ostracism, prohibited the Idaiyars from selling the milk produce. Finally, the Idaiyars freed themselves from the clutches of the Reddiyars.

NADARS

Formerly the Nadars were called as *shanars* which is considered a derogatory term. There is no mention about this people in the Sangam literature. But the Nadars have given an explanation that the word *sanror*(சான்றோர்) has changed in to *Shanar*. They were considered as toddy tappers from the palmyra tree, an occupation which has considerable amount of change by creating new units of consciousness, organizations, and institutions. It mobilized solidarity against the subjection of caste hierarchy and successfully attained a higher status. It occupies a higher status in a changed social order.

The change took place after the defeat of the Palayakars by the British forces in 1801. The changed circumstances and conditions affected the areas of the Nadars in Tirunelveli district and around. In the Tirunelveli district the Nadars lived in villages in which they were in majority. For six

months they climbed the palmyra tree and tapped the juice and converted it in to jaggery *(Karupatty)*. During the rest of the time they worked as agricultural labourers.

Nadars were once not allowed to enter the premises of Hindu temples. But time has changed now .The Social Reform Movements and temple entry programmes under the leadership of Periyar E.V.Ramasamy and other leaders and Government Acts had completely driven out this social inequality. Most of the Nadars who had traded in local markets began to trade widely. They began to build '*pettais*' (fortified enclosures) for business. To day they have come to occupy an important place in the commercial life of Tamilnad and India.

Origin and myths

A number of mythical origins are prevalent among the Nadars of Tirunelveli. *Paththirakaaliyamman kathai, Valangai Nuul Ennum Vengalarajan Kaaviyam and Vengalarajan Kathai* are some of the versions in *villuppaattu* (bow song) form.

Lord Siva invited Kaali and ordered to kill Taarukan. She obeyed and stayed in a fort at Puttaapuram. At that epoch seven celestial virgins descended through a thread ladder to a pond where usually Siva was bathing. Finding that the pond filled with turmeric powder and flowers Siva ordered Tirumal to find out the mischief. As usual the virgins arrived the place. Tirumal with the help of a sage impregnated them. In some other versions Brahma or Indira rather than Tirumal who has done this act.

After delivering seven sons, the celestial women deserted them. The *rishi* requested Kaali to protect the children.When he left the *rishi* said that since they were the children of the virgins from heaven they would have to do their job in the mid-air. This serves as an explanation for their climbing of palmyra tree.

Then *Kaali* went to *Kailaya* to get some boons for her children.During that time because of heavy rain the *Vaigai* was in spate (in some versions it is the Cauvery). The Chola King ordered them to carry baskets of earth to fill up the breach of the river bank. Among the seven brothers. five refused to touch the basket.The Chola King ordered their heads to be troded by an elephant. But, they were protected miraculously by *Badrakaali*. Then *Kaali* requested Shiva to give them food.Shiva promised to give *amiztham* (ambrosia). He informed this to the *puucari(பூசாரி)* of Puttapuram temple to provide the *Amiztham*. One day in the absence of Kaali, the *puucari* has takan it to his house. Knowing this Kaali punished the *puucari* and his wife (Brahmins) by transforming them into male and female palmyra trees respectively. Badrakaali gave the implements to tap the juice. Hence they are traditionally continuing the occupation.

Then they built fortresses for Kaali.The son who built the *Karukumanik Kopuram* was named Karukkumaniyan (sometimes ridiculously called as *Karukkumattai)*. Another son built a *Nattuvarnakkottai*. He was called as *Naattuvaanan.* Another son was called as *Nattukkohaiyan*.The fourth son was *Nattaathi*. Yet another was named as *Meelnaartaar*. The sixth son since he has helped the others, was called *Pulukkaiyan*. The seventh son who obeyed the orders of the Chola king was called *Ilavan*.

In the olden days the palmyra tree would bend before the Nadar in helping them to milk the juice. But because of Naradas trick it stopped bending. Kaali gave them her anklet and changed it as *talainaar* to help climbing the tree. The tradition is still in vogue.

Life cycle ceremonies

For arranging marriages, the bride groom's people will have to go to the bride's house and request the elders to give her in marriage. If they are pleased then they will consult an astrologer. Dowry system was highly prevalent among the Nadars of Tirunelveli. The betrothal ceremony will be held at the bride's home. The bride groom's party will have to pay a sum of rupees 1001 or 501. This ceremony is called *Kaimaarutal.* The bride's people will keep the flower, fruits, coconuts etc., brought by the bridegroom's family safely.This is called *accukkaltivailtal* . The marriages of the Nadar people will be celebrated in the bride's home in the early morning. Before the bridegroom comes to the bride's house, in the early morning *maman catangu* will be performed. But, now a days in town, the marriages are celebrated in Marriage Halls or Mandapas.

The *kaal naattu satangu* is the erectioin of a flower decked pole for *Pandhal*. Only after breaking a coconut to the deity Sasstha, it will be erected at the north east corner of the *panthal*. Another pole will also be planted by tying pipal leaves at the left side of the *manavada*i (மணவடை). Then *Maaman catangu* will be performed. The barber will tie a *kaappu* in the hands of the maternal uncle of the bridegroom. The *kaappu* will be a safety band made of pipal or reed leaves. The maternal uncle will be placed in front of the *manavadai.*

Then the ritual of *anantharam* will take place. In front of the bridegroom the relatives will place a copper vessel filled with water and pipal leaves. The relatives will take the leaves and encircle it thrice around the head of the groom and again they will put it in the same vessel. This is to ward off the evil eye.

Then the bridegroom's people will proceed to the bride's house. Similar kind of *anantharam ceythal* will also be performed for the bride. The bride will be bedecked by her would be sister in law. The groom will pretend to tie the *taali* thrice. But the groom's sister will be the person, who performs

this important act. The sister is called as *poy muutti* that is the false tier. The marriage ritual will be performed in the presence of a senior nember of the community, Nadars are one of the largest communities who began to adapt self-respect marriages prescribed by the doyens of the *Self-Respect Movement*. But, now among the rich Nadar families, engaging Brahmin priest to perform the marriage rituals is not uncommon.

Then the couples and the marriage party will proceed to the groom's house.There the women will take the bride to fetch water from the well.After this ritual food will be served.Then they will return to the bride's house.

Birth ceremonies

At the seventh month of the first pregnancy of the married woman, the people of the natal house will go to the husband's house.After celebrating a small ceremony of wearing bangles, (வளைகாப்பு) they will bring the pregnant mother to her natal house and she will stay there until her delivery. If a male child is born, it will be informed to the outsiders through a *Kolavai* (making a sound with swift turning of tongue). At the eleventh day after birth, the child will be named. The nose piercing practice is common among the Nadars.

Puberty ritual

When a girl attains puberty it will be informed through the washermen to the relatives. During the ritual the maternal uncle's family will bathe her. A small girl will be decorated as a bridegroom and placed by her side during the ceremony.

Death rituals

The death of a person will be informed to the relatives through the scavenger called *thotti* that is a cakkiliyar caste member.The relatives will bring a basket filled with oil, *cikakkai* (Soapnut powder) and paddy which is called *Vaaikkaricippetty*. The female members of the caste will not go to the burial ground. If the deceased person is a first born, the body will be cremated otherwise, it will be burried. If a male is dead, the body will be buried in a sitting position facing the east, if it is a female it will be placed looking towards the north. An unmarried dead person is buried by placing in flattened position.

MARAVARS

Origin and myth

The Kallars, Maravars and Agamudaiyars are called as *Mukkulathor* Eventhough they are considered as one community there are several groups among them. Each group is having its own rules, regulations and customs.

Marriages among these castes are not common among them. Strictly speaking these groups are endogamous.

In order to emphasize the relationship among these three groups there is a mythical origin. Celestial King Indira mated with Ahalya, the wife of Gautama, by trickery. Out of this illegal act three sons were born. The boy who hid behind a door is called *Kallar*; the son who has climbed a tree was called as *Maravan,* but the boy who dared to stand before Gautama was called *Agambadiyan.*

Another myth takes the Maravar's antiquity to the period of Ramayana. For their help in the war with Ravana, Rama thanked the Maravars by saying *Maraven*(மறவேன்)that is *I won't forget you* . The word *maram* inTamil means bravery. Because of their physical prowess and ferocity they were called as *Maravars* is another explanation. The word *Maravar* is mentioned several times in the Sangam literature.

In Tirunelveli district, the Maravars are living in the area from Kalakadu to Sivagiri at the foothills of the Western Ghats. There were a number of Maravar Palayams in this area. They were Singampatti, Urkkadu, Uththumalai, Vadakarai, Surandai, Naduvakkurichi, Chokkampatti, Kurukkalpatti, Alagapuri, Nerkattumseval, Thalaivankottai, Thenmalai (Sivagiri), Kollamkondan, and Sethur. It is considered that the Maravars moved to Tirunelveli from the erstwhile Ramanathapuram district.

There are two main subdivisions found among the Maravars of Tirunelveli district namely the Sembinaattu Maravar (otherwise called Kottaali) and the Kondaiyan Koottiyar. Other sections found in small numbers are called Anil Eeraakkoottai Maravar, Korravaal Koottai Maravar, Cevueel Koottai Maravar, Vamikkottu Maravar, Korandi Maravar, Seka Maravar Amponneeri Maravar, Pambai Maravar, Kaarana Maravar, Akatta Maravar, Pandaara Maravar, Uppukkottai Maravar, Karukuricci Maravar etc. The servants of some Marava Palayakars forming a small subdivision are known as Pulukka Maravars. Pate writes in his book that the Pulukkars and Karukurichy Maravars dine together but not as a rule with members of other subdivisions. Otherwise any, Maravar may feed with any other (Pate: 1906:133). Today there is no barrier in eating amongst the Maravars.

There is a taboo prevalent among the Maravars of Tirunelveli that is they will not eat the fruit of bottle gourd and overstep a creeper of bottle gourd. For this a myth is commonly narrated among the people. It is a recreation myth.

The myth is that once upon a time it rained heavily. All the people were washed away by flood. Only a Marava couple climbed a tree standing nearly with the help of a creeper of bottlegourd. They were the only people escaped from the havocs of flood. The present Marava people are said to

be their descendants. Since they were saved by the creeper they are not eating the fruit of the bottle gourd.

Maravar life cycle cermonies

The *valaikappu* or bangle wearing ceremony on the eve of child birth during the first pregnancy of the Marava woman is performed at the natal house in the seventh or ninth month of gestation. Bangles made of gold, silver or cheaper materials are used for this purpose as per the economic status of the parent of the woman. The woman will return to her husband's home only after the delivery. After delivery the mother may stay in her natal house for 22 days or for three months. Seven days after the birth, seven bands of thread twisted into one cord soaked in turmeric solution is tied in the hip of the child. This is called *Kayiru Podutal* (tying the rope).This ritual is performed by the maternal uncle of the new born child. After the tenth day the naming ceremony will be performed. Ear piercing is also common among the Maravars of Tirunelveli. If two children subsequently die, for the third child the nose piercing ceremony will be conducted and named as Muukkan or Muukkaayi. This is prevalent almost among all the castes of Tamil Nadu.

The girl's puberty is informed to the near relatives through the washerman. The maternal aunt or the paternal aunt of the girl will pour water for the bath, which is called *Tanneer Uurrtrutal*. For sixteen days the girl is kept inside the house. At the sixteenth day, a Brahmin is invited to conduct puja for the ritual.

Marriage

Today the dowry system is common among the Maravars though discouraged and banned by legislations. The custom among the Maravar is that if the bride gets jewels, she is not entitled to get her share in family property. The girl is having the right to get the mother's property and jewels.

The expenditure incurred in the engagement ceremony will be borne by the groom's family. The groom's sister will apply kumkum and sandal on the forehead of the bride announcing thrice that she is going to be the wife of so and so. The marriage will be celebrated in the groom's house.The bride is not sent to the groom's house on Tuesdays and Fridays. A Brahman priest is invited to perform the marriage ritual. There are some small differences in the *thali* of the various sects of the Maravars.

Kondaiyan *Koottai* Maravars wear only one *thali* but the Ciruthali Maravars wear trible *thali*. that is a *thali* with feather placed in each side of the *Pillaiyaar*. Even the economically well to do people will wear the

thali in yellow threads. After the marriage on the first or third or fifth day the *thali* is connected in a golden chain or new yellow cord. This is called *thali perukkutal*. After the marriage, the bride and the groom will have to stay during the night in the groom's house. During the month of *Aadi* the bride will have to stay in her natal house.

Death ritual

The custom of taking *neermaalai* is also prevalent among the Maravars. The sons, sons-in law and grand children will go to a tank or river or well and bring water to bath the mortal remains of the deceased. The barber will tie the *puunuul* on the bodies of the sons of the deceased person. If the dead person is a wedded female, the shroud would be brought from the parents house of the woman. Maravars dispose of the dead either by burial or cremation. Usually, the body will be buried in the sitting position. If an affluent person dies *Katali* banana fruits, coins and flowers are showered in the funeral procession. If it is youngster sesame seeds are sown in the streets. After the dead body is placed in the pyre, a mudpot filled with water will be placed on the head or arm of the eldest son or person who performs the last rites. He will encircle the pyre with his brothers thrice. Holes will be made in the pot for every cricle and at last it will be broken bride the head of the body on the pyre. Finally after putting fire (*kolli*) in the pyre, he will return home without turning back his head. The next day they will clean the grave and transplant *tulasi* or *naanal* or sow nine types of seeds (நவதானியம்) If the seeds and plants sprout, it is believed that the deceased person is a good man.

In the case of burial, the dead body will be put down the grave. The eldest son or the person who performs the last rite would pour the first handful of sand on the body and following that the grave pit will be closed.

The *Karumaathi* a post death ceremony, will be conducted on the seventh or ninth or sixteenth day of the death. The prepared food will be placed in three leaves. The offering will be taken by the washerman, barber and the *pakadai* respectively.

KAMMAVARS, KAMBALATTARS AND REDDIES

Kammavars, Kambalattars and Reddis are the three Telugu speaking communities found in the district. They probably migrated into this district during the Nayaks rule in the late Sixteenth and the early Seventeenth centuries. Kammavars and Kambalattan live in Sankarankoil taluk. Kammavars are agriculturists who have specialised in cotton cultivation. The Kambalattars and the Reddis also are agriculturists, the Reddis are found in Nanguneri taluk too. Many of the Kambalattars and Kammavars are now engaged in cultivation and in cotton trade.

SENAITHALAIVAR

Senaithalaivar is another community in the district who have their settlement in Seevalapperi, Kayathar and Tenmalai. They are also called Mooppanars. They trace their origin to Skanthapuranam and claims to be the descendants of Veerabagu, the commandar or Senaithalaivar of Lord Muruga in His invasion against Surabathman. They are agricultural community.

KAMMALARS

Kammalars are the people who professionally engaged in goldsmithy; stonesmithy and blacksmithy. Locally they are called as Tattar, Kalthattar and Kollar respectively. They constitute a minor community and are spreadover all the parts of the district. In Shengottai taluk nearly 100 families of the *Kollars* or blacksmiths live and they have been specialised in making steel plates and spoons right from the early centuries. They claim to be the descendants of Viswakarma, the celestial architect according to the Puranas. Like Brahmins they also wear sacred threads. They officiate as priests in their community marriages and other religious ceremonies.

BARBERS AND WASHERMEN

The Villages up to the period of early 1940s and 1950s had servicing communities such as barbers, washermen, chakkiliars or cobblers, pariahs, etc. whose services to the people of the villagers were fixed. They received either cash or in kind for their services. Though their services are indespensable they could not enjoy the social equality among the people. As they began to think of their rights guaranteed in the Indian Constituion as fundamental rights and with the efforts of the Self-Respect Movement and other social reforms in the country, their servitude is getting vanished but not completely. Still there are villages in the district where these servicing communities have taken to the avocation of their forefathers .But education has played a vital role in their social upliftment. Many get education and have become lawyers, doctors, engineers and publlic servants. The growth of industry in free India and the employment opportunities have made them to wean from their traditional occupations. Majority of those who could not receive education, continue their traditional occupation with some ethics and dignity. Instead of calling at the residences of the customers to serve them, they have established shops and laundries where the customers have to go for their hair grooming and cloth washing. The cruel social customs in the district such as that the members of the servicing communities have to remove their slippers and the upper cloth on seeing the caste people of the villages have completely faded away owing greatly to the social awakening created in the State by the doyens of the Dravidian Movement, Self Respect Movement and Social Workers.

PARAVARS

In Tirunelveli district the Paravars are mostly found in Nanguneri taluk. Their traditional occupation is fishing and allied works of net knitting, boat building, trade in sea foods etc. The spread of Christianity in the district which dates back to 1532, had influenced the community to a great extent and most of them had embraced Christianity.

They trace their origin to the King Bharatha supposed to have ruled India. The community is noted for its caste panchayat and the headman is called *Jathithalaivar.*

KATASANS

Katasans, is a minor community, found in central and southern parts of the district. Their caste title was pattangatti. The Katasans of Ambasamudram taluk called themselves Pulavan or Maistri. They are experts in the handicraft works of basket-weaving, wood articrafts and making cases and chests of horns. There is exogenous subdivisions among the caste. For example the Katasans of Cheranmadevi and Nallur of Tenkasi taluk were considered inferior to those of Pettai. The Pettai Kattasans considered the Kattasans of Thoothukudi as inferior to them.

Other minor Hindu Communities

The other minor Hindu Communities which live in the district are Kaikdars, Pattarayars, Kaikolars, Ochchan, Panan, etc.

SCHEDULED CASTES

Mahatma Gandhi termed the practice of untouchability as a crime which was knowingly or unknowingly practised by the people from time immemorial and only in the late 19th century, they began to realize this sin and make amend to purify from its impact.[26] The untouchables were called by different names *depressed classes*, *out-castes*, *pariah*, *parcheriars*, exterior castes, etc. The ephithet *depressed* connotes not only low status in the hierarchy of the caste combined with religious and social disabilities but also a low economic condition.[27] In Tamil Nadu, they were called as Adi-Dravidars since 1932 and in 1935 were grouped under the head *Scheduled Castes*. The Chakkiliyas call themselves as *Arunthathiyars*. In towns and Municipalities, they mostly serve as scavengers.They are the most suppressed lot among the Scheduled Castes of Tamil Nadu. They speak Telugu and it seems that they migrated from Andhra Pradesh.Most of the communities were segregated and considered themselves as superior to one another. Even among SCs idiosyncracies exist. Intercaste marriages and interdining were not common among them. In the past, all of them so suffered commonly many social disabilities that they could not use public roadways, public institutions, public schools, wells, bathing places, etc.

They were not allowed to enter into Hindu temples, nor were they allowed to use common burial ghats. They were denied the services of the barbers, tailors and dhobies. Their physical contact with others was considered as polluted. These were all because of the agricultural serfdom, caste rigidity and regulation.Their chance of redressal was not dreamt of for many centuries. Only in 19th century, the process of their upliftment started. The Government, social reformers and the leaders worked for the cause of the Scheduled Castes.[28] Though all their disabilities are legally removed and so many concessions are provided to elevate them, they may be still subjected to some forms of illtreatment in some remote corners of the district. But, the Government have taken necessary steps to bring the culprits to book.

The criteria considered for enlisting a caste under Scheduled Caste was the *untouchability*. Subsequently, the practice of untouchability was made serious crime by legislation. At present, there are 76 communities in Tamil Nadu under Scheduled Castes. In Tirunelveli District, the major Scheduled Castes include the Pallars, Paraiyars Arunthathiyars or Chyakkiliyars, Cheruman, Devendrakulathar, Dombara, Paidi, Pane, Gasangi, Jeggali, Kadaiyan, Kudumban, Kuravan, Sidhanar, Maeliga, Pagadai, Pallan, Pulayan Puthiral Vannan, Samban, Semuan, Thoti and Valluvan. In Shengottai taluk, Vannan has also been shown in the list of Scheduled Caste. The 1961 Census Reports have furnished demographical details of the communities with their name. But, the subsequent Census Reports have not given such information as the Government have taken a policy decision not to exhibit the names of the communities in the Census.

PALLARS

Pallars are a group of agriculturists whose demography falls into 5½ of the total population of Tamilnadu. Since they consider the term *Palla*r is a derisive one, to day they don't want to be called as *Pallar* instead they prefer the word *Mallar* or *Devendrakula velalar*. They say that they are the descendants of the god king Indra. The word *Mallar* is found in many of the Tamil literary works from the Sangam period. Today the word is not found among the names of the castes in Tamilnadu. Hence, they emphatically say that the word *Mallar* has been changed into *Pallar*.

Regarding the origin of the Pallars a myth was already collected by F.J.Richards, which relates them to Devendra. According to the legend the sweat of Devendra fell on a plant. On growing it became the ancestor of Pallars namely, Vadivel Kudumbar. Vadivel Kudumban had two wives. By the first wife, he had four sons who were the ancestors of Devendran, Thattaya Nattan, Pandya Nattan and Kadaya Nattan. Through the second wife the minor Pallars such as Kongu, Vettai, Ati, Kalkatti, Vanni, Thavalai Thinni (eater of frogs) were born, (Pallars of south India. Quarterly Journal

of Mythical Society vol X.265-272). Another myth says that theThevars (Maravars) and Pallars are brothers. Indran had two daughters. Both of them gave birth to two sons. One daughter delivered the son in a secluded place (மறைவிலே பெத்தெடுத்தா) hence, Maravar. Another delivered the son in a pit (பள்ளம்) hence, pallar.

Devendrakkulathar, Kadianan, Kaladi, Kudumban and Pannadi are the sub divisions of the Pallars. In the Tirunelveli district, other sects except the pallars and Devendra Kulathars are not found. These people are divided into four sub-groups, namely, Annaa (அஞ்ஞா) Aiya and Amma, based on the terms they use to address their father and mother. These sub-groups are further divided into some naattaars:

Amma Pallar: Kodai naattaar, Civanthi Naattaar.

Aathaa Pallar: Virapraattaar, Paruthikkottai Naattaar.

Aiya Pallar:

Annaa Pallar: Cikka Naattaar, Celuva naattaar.

Cross-cousin marriages between the maternal and paternal uncle's son and daughter and maternal uncle-niece marriages are practised. The practice of paying bride price (Parisam) is also very common among these people. Naattamai, (the leader of the village) serves as the performer of the marriage. He is the person who takes the *thali* and gives it to the groom. Monogamy is very common. After marriage, they follow patriarchal residence.

The Community Panchayat may grant divorce . In case of divorce, male children remain with the father and the female children remain with the mother. For divorcees and widdows remarriages are allowed.

In the fifth or seventh month of pregnancy, sugar and fruits are distributed. This is called *seeni Palam podutal* (சீனி பழம் போடுதல்) In the ninth month, the pregnant woman goes to her natal house for delivery. In the olden days, the mother will not be allowed to take food for three days after delivery. Among these people, thirty days of birth pollution is observed. One year after the birth of the child tonsure ceremony for both male and female children is observed. For this people, there are separate dhobis and barbers.

Nowadays, a new ceremony *thaavani podutal* (தாவணி போடுதல்) that is wearing half saree to cover the breast of the girl is conducted at the age of twelve or thirteen before puberty ritual. The maternal uncle will bear the expenses of these ceremonies .

The relatives attending to the death ceremony bring a measure (மரக்கால்)of paddy. A kind of chariot (தேர்) will be used to take the body to the burial ground. When the body was carried to the burrial ground, the

barber will make seven holes in the pots carried by daughters of the deceased. Then they will break the pot. They observe death pollution for sixteen days.

Most of the pallars are meat eaters. Since they are agriculturists, they consider the bullocks as equal to a totem. They are not beef eaters.

Before the 19th century, and most certainly by then, Pallars performed almost all the most hard work in paddy cultivation in Tirunelveli district. Social changes have taken place among the Pallars for the past one hundred years.

The impact of the educational and social welfare measures of the Government enabled many of them to become Government employees, doctors, lawyers, engineers, other professionals and holders of public offices. The social changes, hard work and perseverance uplifted them from tillers to land owners.

One of the changes that occurred in the caste system has been a dissociation between hereditary occupatioon. Caste associations such as the Immanuel Devendrar Peravai and Devendra kula Vellalar Peravai are working for social, educational and economic changes. All along the wet zone of theTamiraparani basis today these people are cultivating the lands as owners and tenants.

Venkatesh A.B.Athreya who examined the changes in Gangaikondan village of Tirunelveli District reports that though in 1916 Brahmins used to be the major landholders, followed by Pillais, the major landholding castes in 1980 were Maravars, Hindu Pallars, Konars and Christian Pallars. A sharp decline in Brahmin landlordism, was also found, as they migrated to towns and cities leaving the villages. The village thus witnessed a process of transmission from Brahmin and Pillai landlordism to owner cultivation by the *agricultural castes*, mostly the Pallars and Thevars. In short, the ones who tilled the soil as tenants turned the owners of the soil. [29]

Some of the Pallars settled in the area of Sankarankoil Taluk on the foothills of the Western Ghats are cultivating the zone by tank irrigation.

In 1981, hundreds of dalits in Meenakshipuram in Tirunelveli district were converted to Islam. Meenakshipuram is a dalit hamlet in the village of Tenpottal. This village is few kilometres away from Tenkasi. In 1981, there lived 300 dalit families in Meenakshipuram. Nearly half of them were converted to Islam. Both the non-converts and those who were converted to Islam, emphatically confirm this. Even in some families some are converted to Islam, others are not that is father and son converted but not mother and daughter. There are intermarriages between people of different faiths in this hamlet. There is no change in their cultural interaction. Though the status of these people have been very much

improved, caste permeated every religion to some extent. They seek spouses within their Caste even after changing their religious faith.

The reasons for the conversion were stated to be illtreatment and oppression by the so called high caste people. The *two glass-system* in the tea shops, refusal to serve tea in the shops, mistreatment of children in the schools, separate burial grounds or burning ghats were the oppression and the illtreatments said to be meted out to them. Today incidents of untouchability is much less in the area. The two glass system is vanished in Meenakshypuram. But, this system is still reportedly prevalent in the Tamiraparani basin. Meenakshipuram people get on with their lives. In this village, families exist with members living in Islam, Christianity and non-converts. The people of Meenaksiypuram live today in union with different identities. Some of the Pallars have been converted to Protestant Christianity and Roman Catholic Religion.

Paraiyars

Paraiyars, belong to a Scheduled Caste. They live in all parts of Tamil Nadu. There is a mention in the Tolkaappiyam about the Paraiyar. They were named after the percussion musical instrument *'Parai'*. Some of them play drums at marriages, funerals, village festivals and other functions of private and public performances. But, the *aprasiiyars* of Tirunelveli are not usually performers of *Parai*.

The Paraiyars began to feel that performing *Paraiyattam* at the death rituals of the so called high castes as a shameful act. They felt that it was a symbol of servitude. Hence, they stopped to perform the *parai*. However, in remote villages, older generation still play drums in the festivals and funerals.The vestiges could be found until recently in the proceedures laid down by the rules and conventions that the news of the seizure of the property by auction etc., were to be announced by this community by beating drums.

It may be said that the Parayars were doing the public relation work during the rule of the ancient kingdoms. The Government's instructions were taken to the public by them. For atracting the attention of people they beat drums and announced the instruction.

Along the Tamiraparani basin, they worked as agricultural labourers for the past few centuries. Now, some of the Paraiyars are small landholders. Some of the Paraiyars went to Srilanka in the last century and served under the Britishers. After returning to India, they felt the importance of education and hence put their children in schools.

The administration of the Paraiyar village is looked after by an informal groups of three authorities, namely, two *naattaamai's* and one accountant

(*Kanakku*). These administrators are elected by lot during the summer (Kodai) festival in the village cult. The first two names selected, by lot system will serve as *naattaamais* and the third one as *Kanakkupillai*.

In the olden days, there were some divisions like *ulavupparaiyar, Nesavaalar Paraiyar, Pettimudaiyum Paraiyar,* etc. (The Parayars who engaged in the professions of agriculture, weaving and basket making respectively) Today, these divisions have gone into oblivion and *intermarriages* are very common among these sects. For the paraiyars, there was a separate servicing community person called *Teendaa Vannaar* literally untouchable dhobi.

Cross-cousin marriage is practised among these people also. Rather than seeking out new and fragile ties they prefer reinforcing the old ones. Most of the marriages are celebrated only in the morning time. But the bride will not be sent to the groom's house on Tuesdays and Fridays.

Burial is the usual custom among the Paraiyars of Tirunelveli. They say that the expenses for the burial is lesser than cremation. The burial rituals, will be conducted by the *teendaa vannaan*. They observe the death pollution for 16 days. Social welfare schemes, education and the general awakening have caused the improvement of economic and social conditions of the community. Now, they are able to secure all government positions and practice all professions.

CHAKKILIYARS

The origin of the name of the community traced to the Sanskrit word *Shatkiuli* meaning flesh eaters. Thurston writes that the Chakkiliyans are Arunthathiyars. They generally speak Telugu and are supposed to have migrated from Andhra Pradesh. They eat pork and beef. Their traditional occupation was making and repairing foot wears like chappals. In villages of the district still they constitute a servicing community. The Government have implemented various welfare schemes for their social and economic development and partially they yield good results as most of the children of the community now attend schools and they enter into Government services and other professions.

Scheduled Caste population

The Census of India Report of 1951 shows the scheduled cast population of the pre-bifurcated district as follows:

	Total	*Male*	*Female*
Rural	30840	151313	157088
Urban	63303	31245	32058
Total	94143	182558	189146

The 1961 Census Report has a detailed enumeration of the Scheduled caste population of the district. As the talukwise figures, have been given for rural SC population, the figures corresponding to the taluks which now form Tirunelveli district have been segregated and presented.

SC Population rural areas 1961

Sankarankovil taluk

	Name of the S.C.	*Total*	*Male*	*Female*
1.	Adidravida	1255	615	640
2.	Arunthathiyar	1108	538	570
3.	Chakkiliyan	6719	3289	3426
4.	Devendrakula Vellalar	1086	524	562
5.	Kudumban	16468	8168	8300
6.	Kuravan	346	175	171
7.	Pagadai	940	482	458
8.	Pallar	25156	12554	12602
9.	Parayan	5877	2875	3002
10.	Puthirai Vannan	468	250	218
11.	Samban	1055	527	528
12.	Valuvan	29	16	13
13.	Unclassified	4	4	-
	Total	358144	175655	182489

Tirunelveli taluk

	Name of the S.C.	*Total*	*Male*	*Female*
1.	Adi Dravida	3540	1597	2243
2.	Arunthathiyar	396	202	194
3.	Chakkiliyan	1083	562	521
4.	Devendrakula Vellalar	148	79	69
5.	Kadaiyan	53	21	32
6.	Kudumban	13884	6863	7021
7.	Kuravan	124	56	68
8.	Pagadai	209	73	136

9.	Pallar	17109	8338	8776
10.	Parayar	2858	1144	1714
11.	Pulayar	17	–	17
12.	Puthirai Vannan	632	307	325
13.	Samban	488	225	263
14.	Semmman	10	5	5
15.	Thoti	1	-	5
16.	Tiruvalluvar	4	2	2
17.	Valuvan	39	21	18
18.	Unclassified	292	139	153

Tenkasi taluk

	Name of the S.C.	*Total*	*Male*	*Female*
1.	Adi Dravidar	799	393	406
2.	Arunthathiyar	926	447	479
3.	Chakkiliyar	3938	1996	1948
4.	Devendrakula Vellalar	435	205	236
5.	Kudumban	13304	6601	6703
6.	Kuravan	182	102	80
7.	Pagadai	1468	718	750
8.	Pallan	10853	5392	5461
9.	Paraiyan or Sambuvar	6234	3187	3047
10.	Puthirai Vannan	592	306	286
11.	Samban	858	371	486
12.	Semman	1	-	1
13.	Thoti	2	-	2
14.	Valluvan	173	94	79
15.	Unclassified	1202	602	600

Sengottai taluk

	Name of the S.C.	*Total*	*Male*	*Female*
1.	Chakkiliyan	514	255	259
2.	Kuravan or Sidhaman	189	85	104
3.	Pallan	6693	3300	3313

4.	Paraiyan or Sambavar	2351	1172	1179
5.	Pulayan or Choramar	16	5	11
6.	Valluvan	37	20	17
7.	Vannan	316	147	169
8.	Unclassified	70	43	27

Ambasamudram taluk

Name of the S.C.	*Total*	*Male*	*Female*
Adi Dravidar	5087	2373	2714
Arunthathiar Pandi	314	162	152
Chakkiliyar	1518	778	740
Devendrakulathan	142	76	66
Dom, Dombara Paidi or pana	–	–	–
Gosangi	34	4	30
Kadaiyan	14	10	4
Kudumban	12175	5948	6227
Kuravan or Sidhanan	373	187	186
Madiga	9	6	3
Pagadai	844	441	403
Pallar	7378	3720	3658
Parayan or Sambavar	4785	2269	2516
Puthirai vannan	467	233	234
Sambar	852	315	537
Thoti	21	8	13
Tiruvalluvar	22	8	14
Valluvan	70	38	32
Unclassified	286	169	117

Nanguneri taluk

Name of the S.C.	*Total*	*Male*	*Female*
Adi Dravidar	12883	5963	6920
Arunthathiyar	64	34	30
Chakkiliyar	736	356	380
Devendrakulathan	252	100	1554
Dom, Dombara Paidi or Pana	11	5	6

Gosangi			
Kadaiyan	98	49	49
Kudumban	2925	1452	1473
Kuravan or Sidhanan	453	204	249
Madiga			
Pagadai	365	187	178
Pallar	6368	3137	3231
Parayan or Sambavar	15238	7285	7953
Puthirai vannan	193	96	97
Sambar	1163	509	654
Semman	1	-	1
Thoti	1	-	1
Tiruvalluvar	27	13	14
Valluvan	748	326	422
Unclassified	909	501	408

S.C. Population in urban areas

Name of the S.C.	*Total*	*Male*	*Female*
Adi Dravida	11851	6032	5819
Arunthathiyar	5456	2893	2563
Baira	2	-	2
Chakkiliyan	2708	1168	1540
Cheruman	271	131	140
Devendra Kulathan	118	4	114
Dom; Doubran, Paidi or Pano	31	19	12
Holeya	44	16	28
Kadaigan	186	91	95
Kudumban	568	263	305
Kuravan-Sidhanar	2343	1149	1194
Madari	45	22	23
Nalakeyana	2	-	2
Pagadi	301	165	136
Pallan	32437	16235	16302
Panan	25	17	8
Parayan, Sambavar	14457	6946	7511

Paravan	78	62	16
Puthirai Vannan	640	259	381
Samban	132	22	110
Semnan	32	2	30
Thoti	31	12	19
Tiruvaluvar	82	30	52
Valluvan	708	348	360

1991 Census

S.C. Population of Tirunelveli District

	Block		Scheduled Castes		
			Total	*Male*	*Female*
1.	Vasudevanallur	T	30431	14937	15494
		R	30431	14937	15494
		U	-	-	-
2.	Sankarankoil	T	23615	11726	11889
		R	23615	11726	11889
		U	-	-	-
3.	Kuruvikulam	T	32634	16224	16410
		R	32634	16224	16410
		U	-	-	-
4.	Melaneelithanallur	T	13025	6325	6700
		R	13025	6325	6700
		U	-	-	-
5.	Sengottai	T	19313	9712	9601
		R	19313	9712	9601
		U	-	-	-
6.	Tenkasi	T	21098	10406	10692
		R	21098	10406	10692
		U	-	-	-
7.	Alangulam	T	14267	6940	7327
		R	14267	6940	7327
		U	-	-	-

8. Keelapavoor	T	13239	6439	6800
	R	13239	6439	6800
	U	-	-	-
9. Manoor	T	3563	16359	17204
	R	30940	15082	15858
	U	2623	1277	1346
10. Palayamkottai	T	34750	17049	17701
	R	25735	12529	13206
	U	9015	4520	4495
11. Ambasamudram	T	19542	9481	9971
	R	11250	5488	5762
	U	8202	3993	4209
12. Kadayanur	T	15570	7587	7983
	R	15570	7587	7983
	U	-	-	-
13. Pappakudi	T	11139	5334	5805
	R	11139	5334	5805
	U	-	-	-
14. Cheranmahadevi	T	19188	9118	10070
	R	14064	6702	7362
	U	5124	2416	2708
15. Nanguneri	T	16979	8016	8963
	R	16979	8016	8963
	U	1625	731	894
16. Kalakadu	T	15067	7034	8033
	R	13442	6303	7139
	U	1625	731	894
17. Radhapuram	T	12541	5977	6564
	R	11198	5337	5861
	U	1349	640	703
18. Valliyoor	T	18070	8552	9518
	R	180760	8552	9518
	U	–	–	–

19. Kadayanalloor	T	290	286	4
	R	290	286	4
	U	–	–	–
20. Tirunelveli District	T	447654	218607	229047
	R	353056	172129	180927
	U	94598	46478	48120

T - Total, R- Rural, U- Urban

THE SCHEDULED TRIBES

The Scheduled Tribes found in the district are Paliyars, Kanis,Malaiarayan and Kattunaickens. The Census of 1951 does not give any details of the Scheduled Tribes of the district. The 1961 Census has returned the total scheduled tribe population of the pre-bifurcated district as 703. The taluks now comprise the Tirunelveli district had (in 1961) the Scheduled Tribe population as follows:-

Scheduled Tribe Population1961 (Rural)

Name of Scheduled Tribe	*Sankaran koil taluk.*			*Tenkasi taluk*			*Shencottah taluk*			*Ambasa-mudram taluk.*		
	T	M	F	T	M	F	T	M	F	T	M	F
Kattunaicken	-	-	-	10	5	5	-	-	-	-	-	-
Paliyans	32	22	17	–	-	-	-	-	-	-	-	-
Kanis	-	-	-	–	-	-	-	-	-	195	106	89
Unclassified	-	-	-	–	-	-	15	8	7	-	-	

1961 Census

Scheduled Tribes (Urban)

Name of the S.C.	*Total*	*Male*	*Female*
Irular	6	3	3
Kadar	9	-	4
Kattunaicken	803	159	144
Kurichan	2	-	2
Malai Arayan	58	31	27
Paiyar	1	1	-

In 1969, in the rural areas, there were 195 Kanikars in Ambasamudram taluk, 32 Palayars in Sankaran koil taluk and 10 Kattunaicken in Tenkasi taluk. In Urban centres of the prebifurcated district, the tribal population was 369.

Talukwise population of the Scheduled Tribes in the district as enumerated in the 1971 Census is as follows:-

Scheduled Tribe Population- 1991 Blockwise

Block		*Scheduled Tribes*		
		Persons	*Male*	*Female*
1.	Vasudevanallur	543	279	264
2.	Sankarankoil	47	23	24
3.	Kuruvikulam	121	57	64
4.	Melaveedithavathur	2	-	2
5.	Sengottai	114	51	63
6.	Tenkasi	32	19	13
7.	Alangulam	462	250	212
8.	Keelapaluvoor	25	12	13
9.	Kadaiyanallur	162	83	79
10.	Manur	7	5	2
11.	Palayamkottai	635	321	314
12.	Ambasamudram	182	86	86
13.	Kadayan	177	88	89
14.	Pappakudi	97	51	46
15.	Cheranmahadevi	367	186	181
16.	Nanguneri	201	91	110
17.	Kalakadu	613	314	299
18.	Radhapuram	1805	820	985
19.	Valliyoor	641	305	336
	Total	8975	4445	4536

KANIKKARAN

Kanikkaran is a tribal community living in the Pothigai hills of Southern Tamilnadu. Their habitations are found at Papanasam and Sengottai in

Tirunelveli district and at Tovalai, Vilavangodu and Kalkulam in Kanniyakumari district. They are also living in the hills of Neyyartinkara and Nedumangadu taluks of Trivandrum and Kollam districts of Kerala.

They are also known as *Kanis, Kanikkars, Kaaniyan, Velanmars, Malai Arasan, Malavelans* and *Velanvers* inTamilnadu. Their population is around 1000 in number. They live at Mayilaru, Agasthiyar nagar, Servalaru and Ingikkuli near Papanasam. Ingikkuli, Peyaru, Manathandi, and Palvellakkani are considered as their native places.

The physical characters of the *Kanikkars* are given in the Anthropological survey of India.

The Kanikkars are short statured dolichocephalous with round or oval faces, and a broad nose. Buchi (1953) postulated on the basis of a serogenetic study (Gene A = 11.7 per cent, B= 6.8 per cent, R1 =69 per cent, r=19 per cent, M=79 per cent and se=72 per cent) that the Kanikkars appear to be typical representatives of the Malid section, who do not seem to bear any physiological resemblance with Negritoes, but indicate a relationship with the Australian aborigines (Australoids). He further emphasised that the blood gene distribution of the Kanikkar puts them closest to the caucasoids.

Their living place is called as *Kaan*i. In each *Kaani* around ten to forty families are living .Their settlements are found near river-beds .

Their huts are protected by bamboo fences. These fences protect them from dangerous wild boars and *mila* deers. Sometimes wild animals ravage their plants and huts. In order to protect them they domesticate dogs. If wild animals come near their huts they understand them by the barking of their dogs.

Their huts are thatched with *Tharuvai* grass or *Aalappanai Olai.*

They are non-vegetarians, but they do not eat beef and pork. Rice and tapioca are their staple food. They also eat several wild tubers and roots.

Origin and myth

There is a mythical tradition about their origin. Once there lived a husband and wife in a hill who were created by the god. They gave birth to seven boys.They lived there by hunting animals. Similarly another couple also lived in another hill. They were also created by the god. They had seven female children. When, they were hunting, the parents of the female children were killed by tigers. The girls were afraid of hunting. Hence, they lived there by eating fruits. Then they began to cultivate millet *(tinai.)*

After some time the area suffered a drought. The animals ran away from that area. One day the eldest son went for hunting. He was returning empty handed without getting any prey. On the way he saw a row of ants carrying *tinai* in their mouths. He went on a search to find out the place from where they were coming. He found out that they were coming from a far off fertile forest beyond seven forests.

He saw a hut on a big tree. He climbed it and found a girl. She asked him who he was. He narrated the whole story. Her sisters have gone to safeguard the *tinai* crops. Not knowing what would happen to the boy by her sisters, she put him in a hideout and he stayed there for some time. One day he wanted to go away. He told her that he had six brothers and requested her to come to his place with her sisters. She informed this to her sisters. Then they went and lived together.The Kanikkarans are the descendants of the above seven brothers and seven sisters, according to the mythical tradition.

Social Organisation

Each *Kani* is having a leader called *Muttukkani* (முட்டுக்காணி) which is a hereditary position. Now this tradition is slowly changing. *Muttukkani* will preside over the meetings (Panchayats) to settle all the problems in their *kani (settlement)*. In the meetings decisions will be taken for the preparation of cultivation, fixing the date of sowing and reaping and the date for worshipping the god. It is the duty of the *Muttukkani* to test the identity of a Kani coming from the adjacent or other hills and helping the persons from the plains.

If an unfamiliar person comes and tells that he belongs to the *Kani* tribe, the Muttukkani will try to identify him by asking a few questions.First he will try to ask about the place of birth of his ancestors and his *illappirivu* (sect) Next the questions will be about the ways of hunting. The questions will be about the knots for catching the hares, foxes, and deers If he is not satisfied he will shift to question the new comer about the *mantras* of binding the tigers of the forests. If he is satisfied with the answers the new comer will be accepted as a guest.

In order to help the Muttukkani there is another person called *Vilikani*. *Vilikani* means literally *a kani who calls*. It is the duty of the *Vilikani* to carry out the orders of the Muttukkani by inviting the other kanis to come together, and bringing the messages of Muttukani to the other Kanis.

For each Kani's settlement there is a *Pilathi*. This *Pilathi* is a magician. Pilathi will help the Kanikkars by curing the diseases, warding of evil spirits, protecting from the animals and sacrilege through magic. If the *pilathi* becomes old,it is believed that the god will come in his dream and

intimate the name of the incoming *Pilathi*. The old *Pilathi* will teach the *mantras* to the new *Pilathi*. The new *Pilathi* will do penance for 11 days. It is believed that the new *Pilathi* will return to the Kanis with god's grace and with the knowledge of medicinal plants.

Muuthavan is another knowledgable person for each kani's settlement. He is an adept in deciding the period of sowing and reaping. He will inform the Kanikkarans what to sow during a particular period. The Kanis will begin agricultural work only after the Muuthavan began to cultivate. Now because of changes in the form of cultivation the office of the Muuthavan is faded away.

Muuttukkani, Vilikani, Pilathi and Muuthavan are the four powerful persons in each Kani's settlement. Each Kani will function only by the guidance of the above four persons.Kanis are not having barbers, washerman and artisans separately. Until recently they are not having the custom of cutting their hair,but now it is changed.

The Kanikkars are divided into ten subdivisions called *Illams* or *Kudumbams*. These ten *Illams* are classified into *maccambi Illam*:(affinal families) and *Annan-thambi Illams* (Fratanal families). The maccambi Illams are *Veyillam, Thalamillam, Mangottillam ,Muungottillam, and Kurumbillam.*The *Annanthambi* Illams are *Muttillam, Perumillam, Velanaattillam Kaiyillam, and Peruncillam.*

Marriages are arranged between the *Maccambi Illams* and *Annanthambi illlams,* but not between the same group. The term *Illam* is also in use among the Nayars and Nambudris. *Aappandicaavu* is the primary family deity (kula deivam) for the *Annanthambi Illams*. *Paaraicaavu* is the main deity for the *Maccambi Illams*. They identify themselves in the form of these deities.

Economy and livelihood

Until the last century the Kanikkarans lived by hunting. Moreover they were food gatherers. Digging wild roots, collecting fruits and honey were prevalent among them.They shifted their settlements from place to place.Land ownership was not prevalent among them. Slash and burn culture was their usual custom. Now hunting and slash and burn culture are prohibited by the government. They are forced to settle in a permanent place.

Now they are living by cultivating *paddy (Kaarnel, Cennel), Colam Kambu,* plantain and tapioca roots.

Dress

They used barks of trees as dress in the past. Now they dress themselves with modern clothes. Conches, shells nuts,palm leaves and tiger nails were used as ornaments.Now they wear metal ornaments.

Language

They speak a dialect which is a mixture of Tamil and Malayalam. Kokkarai is a musical instrument peculiar to the Kanis. It is a cylindrical piece of iron with serrated edges. An iron rod is attached to the instrument. The rod is rubbed in the serrated edges to produce music.

PALIYARS

The Paliyars live in small isolated groups all along the Western Ghats from Palani hills in the north down to Tirunelveli hills in the south. It is recorded in the 1931 Census Report that the Paliyars of Courtalam fled the persecution of the Nawab and settled there. The author of the Report opines that it might be Tipu, not the Nawab.[30] The Paliyars of Tirunelveli are called as *Kara Hu* while the Paliyars of Madurai are called as *kavu*. As early as the early decades of this century, the Paliyars had diversed almost entirely from the tribal custom.

The Paliyars are said to have been the most miserable tribes in the State.[31] The language that they speak is Tamil. Honey collection and hunting are their traditional occupations. They domesticate dogs.

The Paliyars remained uncivilised and many lived in caves even as late as 1960's.[32] But a socio-economic survey coducted in 1996 reveals that they resemble the people on plains in the mode of dress food habitations etc. in most cases.[33]

There are different tribes among the Paliyars. The Muthuvans are a very shy tribe. They avoid all contacts with the people from the plains. They have great respect for women and there are separate huts for unmarried women.

The *Uralis*, a division of Paliyars, who are not as civilised as Muthuvans or Arions are yet another division of the tribe who are industrious and hard working. They call themselves as the superior Paliyar tribe and do not associate with other divisions of the tribes. They speak Malayalam. *Manna* is also a division of the Paliyars. These people are not only industrious but also intelligent group. They are sturdy and fair complexioned. They lead a settled life and are ruled by a chief elected by them. They speak Tamil with a modulated accent. Marriage among the Paliars is not a contract but one of convenience. Polygamy prevails among them and many families live together in one hut.

No proper account of the origin of these Paliyar tribes is available. One school of ethnology holds that they were the early Dravidians driven to the hills by the Aryans, while another considers that they are the descendants of the people who took shelter in these hills when the Carnatic wars were raging in southern districts.

Paliar Tribe

The Paliyars worship *Palichi Ammal.* They have no knowledge of any other Gods or Godesses. The Christian Mission had played a vital role in the social and economic upliftment of the tribe. They started their work in 1902 and the services of Moses Muthumalai to the Paliyar tribe is ever remembered with great reverence.

Religious conversion was essential to rouse the rational consciousness against religious hypocrisy and dishonesty. It was a revolt against the suppression and enclavement of humanity. Conversion has brought about revolutionary improvement in their habits at no cost. To the oppressed communities conversion did help to secure self-respect and to achieve social security. By embracing Christianity the oppressed communities had progressed economically, educationally and culturally and have gone up in the social ladder.

KANIYANS

Kaniyan community is a Schedule Tribe. Kaniyans are variously called as Kanisan and Kanisa. They are considered as the natives of Malabar. The term *Kaniyan* means the people who calculate and predict the fortunes of the people. As per the survey conducted by the Anthropological Survey of India that they are now settled in the States of Karnataka, Kerala and Tamilnad. L.K.Anantha Krishna Iyer mentions in 1905 about the Kaniyans of Cochin.

In Tamilnad the Kaniyans are distributed in the districts of Kanniyakumari, Tirunelveli, Thoothukkudi, and Coimbatore. It is believed that Kaniyans' forefathers migrated toTamilnadu from the Travancore region. The Kaniyans of Tirunelveli now converse only in the Tamil language. They are notified as the Kaniyan and Kanyan inTamilnadu and their population is 1038 (539 males and 499 females) according to the 1981 census.

The Kaniyans are divided into eight *Kilais* (branches) and two divisions.The first division consists of *Athanik kilai, Pulik kilai, Kalamanaik kilai and Makkadaik kilai.* The second division includes *Koranthai kilai, Vetumaik kilai, Avalikkilai and Pannik kilai.*

The *Makkadai kilai* people are living in small number. They follow the matriarchal inheritance of property. The custom of marrying the sister's daughter is not prevalent among the Kaniyans.Cross cousin marriage is common among the Kaniyans. If they will not marry the *maeei*, (female cross-cousin) they can marry her daughter. If a man doesn't have children his sister's children will perform the last rites.

The Kaniyans of Tirunelveli district are scattered over the plains. They are doing the agricultural works for livelihood. Some of the Kaniyan's

are performing the *Kaniyan Kuuthu* during the Kodai (summer) festivals celebrated for the local deities.

Though they are settled in the plains and speaking the Tamil language some of the tribal qualities are still dominant in their life. Their number is very small. This tribe is not still cling to its pristine moorings. It has adjusted themselves to the impact of dynamic culture. Even though they have settled in villages, they preserve their values songs, ballads and dances.

Some of the Kaniyans donate blood sacrifices during the kodai (summer) festivals conducted at the cremation ground. Giving blood to the deity by cutting the forearm and tongue is still prevalent in the southern districts.

The places where the Kaniyans live are called *Kaniyan kudi,* Kaniyan street. The Kaniyans call themselves as *deivak kaniyan* (divine kaniyan). They say that they were created by Siva, and narrate a few myths of their origin.

Myth 1: When Siva , Parvathi and the gods were dancing in Kailaya, Parvathi stumbled and fell down on Brammha's leg. From her anklet two gems came out and rolled. Out of those gems, Brammha created two children and named them as Kampar and Kaniyan.

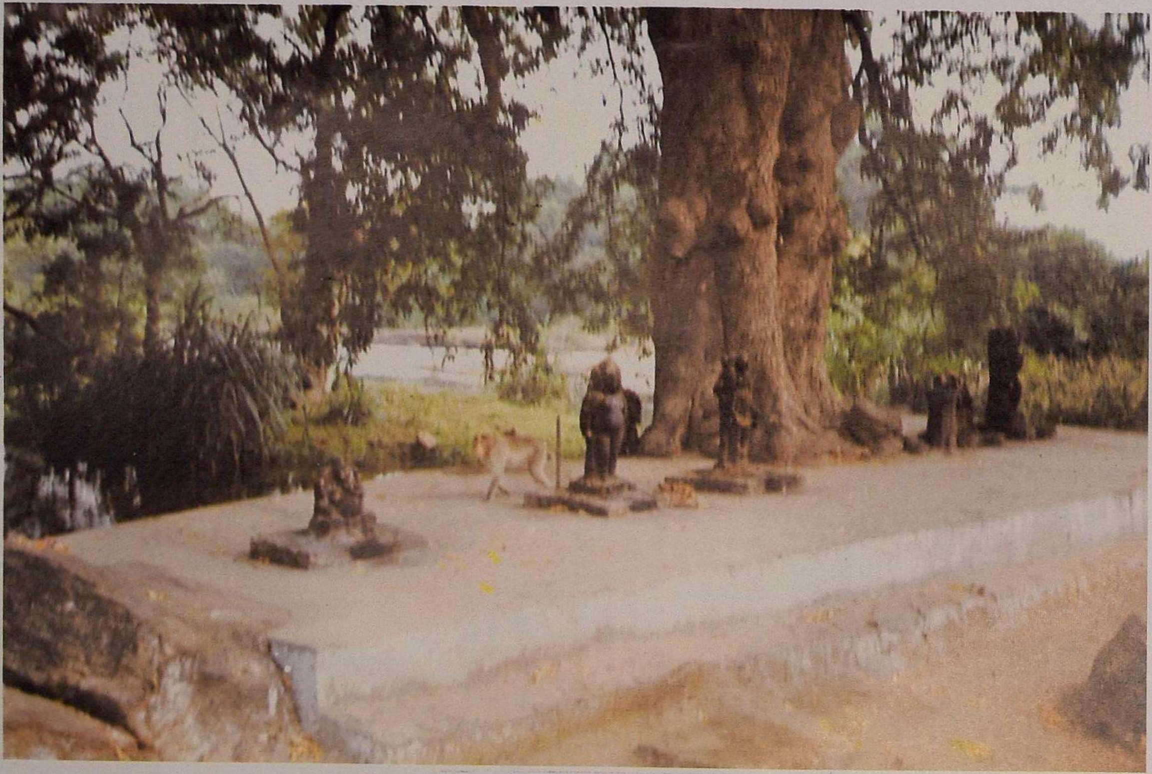
At that time Parvathi could not differentiate Siva and Brammha. Hence. Siva pinched the central head of Brammha and made him four headed. So, Siva was affected by Brammahathi. Then, he began to dance in the cremation ground.

Tirumal made a bell and a crown (மகுடம்) out of the severed head of Brammha. He gave the bell to the Kampar and the crown to the Kaniyan and ordered them to do 'pooja' to the Kali temple. One day the Kaniyan fell asleep. From that day onwards Kaniyan has lost the right to perform the pooja inside the temple. Hence, he performs the pooja outside the temple.

Myth 2: In order to rule all the world, Dakshan performed a *yaga.* Dakshan did not want to give the sacrifice to Siva and was destroyed.

Then, he worshipped and did penance. From that yaga kunta, Bramma Raakshasi was born followed by Matau. But he refused to come out of the *yaka kunta* and demanded a pooja to be performed by periya Kaniyan with crown (makutam) and the blood from the tongue.

Then Dakshan asked Siva to create the Kaniyan. Siva ordered the seven divine girls to dance (சப்தகன்னிகள்) under the leadership of Indirani the wife of Indra. When Indirani danced before Siva from her anklet a gem came out and Kaniyan was created.



Kani Temple

Today it is told that there are three hundred families of Kaniyans living in the districts of Tirunelveli and Thoothukkudi. Srivaikuntam, Nanguneri, Tenkasi, Kurumbur, Thachanallur, Paanankulam, Munradaippu, Sivakalai, Palaiya Pettai, Araikulam, Nambiyuthu, Kariyandi, Rammaneri, Kompankulam, Manappatai Veedu, Panakudi and Sattankulam are the villages where they are living mostly in rented houses.

Dowry system is not prevailing among the Kaniyans. The custom of *parisam* is prevalent among them. Rupees eleven or more, according to their economic status are paid as *parisam* (bride money). During the ceremony of *niccayathartham*; (engagement) the maternal uncles of the bride and bridegroom are given importance in the marriage. Marriage will take place at the bride groom's house. Widow remarriages are common in the Kaniyan tribe.

The last rites of an aged man will be celebrated like a marriage. The body is not cremated but is buried. After three days the relatives will spill milk on the burial ground. On that day they will cook the *navatanya* (nine kind of cereals) without salt and take it to the burial ground in a new basket. They will offer food to the crows. Only after the crows have taken food, they will eat. The head of the person who has done the last rites will be shaven. Traditionally the mourning period for the bereaved is sixteen days in this community. The rituals conducted on the sixteenth day is called *muulai Othungavaittal*.

The Kaniyans are not earning a permanent livelihood. Some of them are converted to Catholic Christianity. The Catholic Kaniyans are somewhat better than their counter part of Hindus in economy and education. *Bammi amman is* worshipped as their family deity *(kula deivam)*.

CHRISTIANITY

ROMAN CATHOLICS

Christianity in India is as old as that of Christ himself. St. Thomas, one of the Apostles of Christ came to India and spread Christianity in Kerala and the Malabar coast. After a long interval Portuguese Missionaries came to India and converted a number of people in Tirunelveli district in to christianity.[34]

Roman Catholic Mission

The cradles of Christianity in the composite Tirunelveli district were Thoothukkudi, the whole coastal area of the gulf of Mannar upto Kanniyakumari, Kamanayakkanpatti, Kayattar and Vadakkankulam. The first Roman Catholic Mission that visited Thoothukkudi was in the year 1532. But, the mass conversion of the Paratavars lived in Gulf of Mannar have taken place in 1536. But as a result of the bifurcation of the Tirunelveli

district, the history of Roman Catholicism has to be begun with Vadakkankulam.

Joseph Constantine Beschi, later called Veeramamunivar an Italian Catholic Missionary did his missionary work in Kamanaickenpatty, Kayathar and Manapadu. He was imprisioned by the people of Kurukkalpatty village of Sankarankoil taluk suspecting his missionary work. He was rescued by the Christians of Kayathar. He excelled in Tamil language and his contribution to Tamil is indispensible.

In 1644, some Christian families lived in the villages of Minkulam and Thirukkaalur. This was mentioned by Father Andrew Lotus. But, Fr. Andrew Lotus didn't write anything about the first family converted to Catholicism. In 1714, Father Brandolini founded a Congregation in Vadakkankulam.[35] But, earlier to that in about 1680, the first Shanar congregation began with the conversion of a woman named Sandayi and her husband, Gnanamuthu at Vadakkankulam and a church was built there in 1685. This church was built by Rev. John De Britto, who was murdered at Oriyuur near Ramanathapuram. In 1745, one Nayar named Neelakandan, a chieftain in the army of the Travancore state was converted to Christianity. But he was shot dead in 1752. Some of the Vellalas had entered into the Catholic religion in this period. The church which we are seeing in Vadakkankulam was built in 1855. But, among the Catholics, caste differences created many problems. Hence, the Vellala Catholics and the Nadar Catholics demanded and pressurised the priests to build different churches for them. But, a church was constructed with two parts containing one sanctum sanctorum, which was sarcastically called as *Trouser church*. Vellalas, Mudaliyar, Kammalars and Paratavars remained on the southern side and the Nadars and Pallars on the Northern part during the time of prayer.

The Nadars, in 1872, opposed this practice. The height of the wall between the two portions of the church was 3.5 feet. Since the Nadars were four fold in strength than the Vellalars they transgressed the rule and appealed to the church authority, the Bishop. The Bishop gave them some concessions. The caste oppression and fanaticism were so terrible. Some of the reverend brothers of the Sacred Heart Society of Palayamkottai, of course Nadars, were not allowed to enter the Church through the southern portion of the Church.

In 1910, the Vellalas refused to sing the hymns during the worship. On 16 October 1910, they shouted at the church during the mass and walked out of the church. The Parish priest father Adrian Causanal was firm in abolishing the caste atrocities. He complained about this incident to the Bishop of Tiruchirappalli. After getting his permission, Causanal

ordered to demolish the wall dividing the church. The Vellalars went to the court. The court ordered to rebuild the wall within two months. But, finally, in the appeal, the court dismissed the case and gave the judgement in favour of the church authorities. Because of this caste conflict some of the Vellalars joined the Protestant sect of the American Church. Though the wall at Vadakkankulam dividing the church was demolished, caste differences are not vanished among the Catholics.

By 1823, there were Roman Catholic churches in the district at Palayamkottai, Tirunelveli, Pettai, Seevalapperi, Viravanallur, Tenkasi, Vickramasingapuram and Kalakkadu.

There were 30,000 Roman Catholics in the composite Tirunelveli district by 1820. Tirunelveli district Roman Catholics were once under the Bishopric of Tiruchirappalli. Then upto 1973, they remained in the Madura Diocese. In 1973, Tirunelveli Diocese was created and a new Bishop was ordained and consecrated. In educating the poor and in the upliftment of the downtrodden, the services rendered by the Catholic community is enormous. Today, they are running schools, colleges, poor homes, hospitals, etc.

Roman Catholics of the Tirunelveli district live in all parts of Tirunelveli. Because of the service done by the priests and nuns most of them are educated and employed in various jobs. Paratavars, Nadars, Pallars, Paraiyars, Vellalars, Maravars, etc. are there in the Catholic religion.

PROTESTANT CHRISTIANITY[36]

Though Protestant Christian Mission has taken root in the Northern Tamil Nadu by Ziegan Balque in 1706, it spread to Tirunelveli only in 1770. Rev.Christian Frederick Schwartz was responsible for this endeavour. In his diary Schwartz mentions that one of his Tiruchirappalli converts was engaged in preaching to the Tirunelveli people. Rev.Schwartz then chaplain for the English garrison stationed at Tiruchirappalli, paid a visit to Thatchanalluur in Tirunelveli district. Then he visited Palayamkottai. He baptised a thirty-two year old Hindu lady, a widow of a Mahratta Brahmin, saved by an English army officer from funeral pyre.Her name was Kokila alias Clarinda. She was baptised by Schwartz on 24th March 1778.Then she built the first Protestant church at Palayamkottai in Tirunelveli district. The well dug by Clarinda was called *Paappathiammaal kinaru* and is still in use.

Within two years Clarinda converted 40 members of various communities. Schwartz consecrated the church on 24th August 1785. The Christian people attended the function were eighty in number.Even before she had finished the construction of the church at Palayamkottai

she built a small prayer house inTherivilai. On August 29, 1754 nine Nadars and 16 Paraiars were baptized there.

In order to get a permanent missionary worker Clarinda went to Thanjavur to meet Rev.Schwartz, but he was away from Thanjavur. When Schwartz returned to Thanjavur he came to know the purpose of Clarinda's visit. He immediately sent his trusted assistant and catechist Karpagam Sathiyanathan. In the words of D.Packiamuthu:

"Sathianathan was a convert to Protestant christianity through Schwartz inTanjore. He was a Vellala from Uthamapalayam in Madurai District. Sathianathan was working as a Catechist from 1785 to 1790 in Tinnevelly. After five years of experience Schwartz called him back to Tanjore, ordained him as priest according to Lutheren rights and sent him back to Tinnevelly. Therefore he was the first ordained Tamil Minister inTinnevelly"

Since 1791, German missionaries like Jaenicke (1792 to 1800), Gericke (1800-1804), Ringeltaub (1806) were sent to Tirunelveli to promote Christianity by the Society for the Promotion of Christian Knowledge (S.P.C.K.)

By 1816, When James Hough was sent as Chaplain at Palayamkottai by Church Mission Society (C.M.S) half of the converts had given up Christianity, but Hough had made sea of change. He started schools, distributed copies of Bible and prayer books.

Charles Theophilus Ewald Rehnius, the most notable and a ablest missionary, born in Prussia, arrived in Palayamkottai on 7th July 1820. At Tirunelveli Rhenius built the Trinity Cathedral, which is even today called as *Ucikopuram(ஊசி கோபுரம்)* He started a seminary for training catchists and teachers and a girl's school. Rhenius travelled on his white horse, preaching and distributing tracts. To avert caste oppression land was bought and new Christian settlements were created.

In October 1822, Rhenius had founded the tract society at Palayamkottai and Nagercoil H.R. Pate writes "He instituted a poor fund, a widow's fund and Bible societies; he made numerous converts and at the same time supervised the congreations belonging to the old S.P.C.K.Mission".

In 1824, the S.P.C.K. transferred their charges to the Society for the Propaganda of the Gospel. But it sent a missionary David Rosen only in 1829. He left Tirunelveli after serving for a year. Then the Tanjore missionaries resumed the normal charge. In 1834 the C.M.S.suggested to hand over the Tirunelveli Missions to their whole charge. The offer of giving in exchange Mayavaram (Tanjore)mission was turned down by S.P.C.K. The two societies worked side by side in the district. The

C.M.S.London society wanted to severe their relations with Rhenius and took over the Mission.

Settled at Arcot for one year Rhenius returned to Palayamkottai. In October 1836. Rhenius returned because of the invitation from a group of people. The German Evangelical Mission formed its mission at Sindhupoonthurai. On the 5th November 1836 Rhenius passed away in peace. His mortal remains were burried at Murugankurichi.

In 1836, the first English Missionary was sent to Tirunelveli by the S.P.G.and from that date a regular succession of missionaries followed from both the S.P.G. and C.M.S.

The district was divided into two parts. The S.P.G. received the Nadar areas of the southeastern Taluks of Tiruchendur, Nanguneri and Srivaikuntam. In 1841, a young Scottish Missionary, Robert Caldwell was sent to Tirunelveli by the S.P.G.. In 1877, Caldwell and E.Sargent were elevated to the position of Bishoprics. Caldwell served in the places, which are mostly now in the Thoothukkudi district.

In this context, a notable conflict between castes in the Protestant congregation must be mentioned. The beginning of the conflict can be dated from 1860. The conflict was between the Vellalars of Palayamkottai and the Nadars. The Vellalars were a community of 200 members. The tensions between the above communities were openly expressed in the 1880's. One of the expressions was the outbreak of a pamphlet war over caste status. The second was the effort made in 1884 by the Vellalars to send Missionaries to convert exclusively the high caste Hindus in order to compensate for the overwhelming numerical dominance of the Nadars. Three Missionaries were sent. They established schools for high caste people. The third one was concerning the problem of seating in the church. The Vellalars had asked to be given chairs to sit in the church. They thought sitting on chair's was an adequate expression of their higher social status in the caste hierarchy.Bishop Edward Seargent sought to avoid making differences between the members of the congregation by installing an attempt to separate themselves from others. Vellalars, then sat together in a corner. The death of Bishop Seargent in 1889, heightened the caste tensions.

A new Missionary T.Barton was sent to handle the matters of the district. The *Vellala corner* was given to the choir and all adults were made to sit together. But another problem arose as to who should occupy the prominent place in the front. The church governing council could not solve this problem. Barton attempted to solve this by giving seats to intellectuals and socially qualified people as done in England. He reorganised the governing council by having a twelve member committee elected by ballot. This only added to tensions. In 1890 nine Nadars and three Vellalars were

elected. The Vellalars demanded an equal representation. Baron remained firm.

The Vellalars stopped coming to the church, some refused to sit in the front pew; some others stopped taking communion. Some Vellalars demanded separate cemetries for burial. They began to conduct burial rites in unconsecrated grounds. Then the Vellalars built their own church at Palayamkottai in 1894. Then in 1896 a new British Bishop, Morley was appointed. He started the Indian Missionary Society at Tirunelveli in 1903. The splinter Vellala group rejoined the Trinity Church .Their building was sold to Edward and company. Over the years Vellala Christians left Palayamkottai.

Bishop Morley was chosen for the Special Superintendent of all churches of England, in the district of Tirunelveli and Madurai. The out-stations of the C.M.S. were brought under central control. A superintending Missionary and Chairman was appointed with two assistants.

H.R.Pate gives a vivid account of the society: "The society owns over one hundred and fifty churches in the district, amongst which may be specially mentioned Trinity Church, Palamcotta, built by Rhenius in 1826, and St.Paul's Megnanapuram church, completed in 1868. From the earliest times education, mainly with a view to evangeliazation, has been a marked feature of the Society's work. Besides the Sarah Tucker College for women and the Church Missionary Society College, the Mission maintains two high schools, five secondary schools, several hundreds of elementary schools and one training school.

In 1905, Rev.Wilian was sent from Madras to Tirunelveli. In his period he had consecrated 26 churches in and around Tirunelveli. He criticised severely the practices of going to the astrologers, getting dowry and spending extravagantly for marriage,which were prevalent among the Protestants of those days.

Bishop R.Caldwell in his paper issued in commemoration of the first centenary celebrations of the Tirunelveli church in 1880 had given his concluding prediction that if in the first 100 years of the history of Tirunelveli Mission, it has grown from 90 souls to 50203 to give the number of the babtised above by the and of the second hundred years (i.e.,1980) nearly the whole of the Tirunelveli should be converted to Christianity. According to 1991 Census, the Christian population of the district, is 121277 males and 131453 females.

On the reasons that led to the conversion of people into Christianity many volumes can be written. But, they altogether focus on the social conditions that existed then. Certain communities like the Pallars, Parawars, Parayars and Nadars which could not enjoy social equality were easily

converted by the Christian Missions. The Christian Mission not only converted them but also looked them after by providing education and other social welfare measures. As the first converts could get higher status in the society by their education, many followed suit and thus caused spread of Christianity.

Till the end of the 19th century the Protestant Christian enterprises in the district were carried on independently by the Church Missionary Society and the society for the propagation of Gospel. Among the forces that worked for the merging of the two missions later was the creation of a separate Bishopric for Tirunelveli in 1896. Until then Tirunelveli was a part of the jurisdiction of the Bishop of Madras. In March 1924 a separate Diocese for Tirunelveli was established. *(K.N.Krishnasamy and C.A.Souter Madras District Gazetteers - Statistical Appendix, together with a supplement to othe Gazetteer (1917) for Tirunelveli district, Madras, 1934, p.170.)*

Though people from different castes and religions embraced Christianity, they did not part with their caste identity but still remain as Nadar Christian, Pallar Christian, Parayar Christian, etc., Inter marriages among them seem rare. Despite conversion, common customs do not seem to exist among them, and still they persist with their own community customs.

THE MUHAMMADANS

The composite Tirunelveli district had coastal towns which promoted trade relations with the Arabs, Romans and others. The trade relation with the Arabs and the formation of Madurai Sultanate in the 13th century had caused the spread of Islam in the district.

In the Tirunelveli district Mohammedans[37] are living in large numbers in Tenkasi, Tirunelveli and Ambasamudram Taluks. Melappalayam, Pettai, Tenkasi and Pottalpudur are some of the towns thickly populated with the Muslims. Saffi, Hanafi, Malike and Ambaliki are the four religions sects deriving their origin from four deciples of the Prophet represented in this district. The Muslims speak Tamil in their homes. But their mother tongue is Arabic. *Labbai* is a term reserved for priests. Pattan's mother tongue is *Urdu*. Saffis speak a kind of Malayalam mixed with Tamil. Hanafis are a Tamil speaking group. Pattanis are considered as the descendants of foreigners, Saffis are Malayali descendants; Hanafis are converted Tamils to Islam.

Generally the title *Sahib* is currently used as a title of honour and is commonly used for all Muslims. The title *Rowther* is generally applied to the names of Hanafi Muslims. *Rowther* means an expert in horse training and cavalry. The Muslims who were in the profession of importing Arabian

horses to Tamil Nadu and training them assumed the title *Rowther. Maraikayar* is another sub division of the Muslims. They were sea farers and traders using ship which in Tamil is called *Marakkalam.* The term *Maraikayar* might be derived from the term *Marakkalam.*

Among the Safis there are two sects; One is called as *Kunduvetti katchi*, another as *Kayal Pattinam Katchi*. Intermarriages were not held among these two sects in the past years. Now it has changed. Both sects are having independent priests for religious services. They are called *Tangal.* They are the people who perform the rituals from birth to death. Even though their native places are in Kerala they will visit the Saffis houses on invitation. The Post of *Tangal* is derived through descendancy to the eldest.

The three sects of Pattani, Saffi and Hanafi have their own *macwtis* for worship. The worshipping time are different from each other. The duration and the pattern of worship are almost the same. These three sects are having different barbers for their services. They are called as *Ostas*.

Among the Muslims of the district one could find the mingling of culture of Hinduism and Islam. On the occasion of births and marriages like the Hindus of the district, the Muslims also make a wail which is called *Kulavai.* The *Kanduri* festival of the Muslims in which sandal adorned chariot-like structure is taken in procession is an almost resembling the Car Festival of Hindu temples.Islamism has influenced the local customs to a certain extent. The wearing of *Alkuthu* a continuous line of ear rings by Muslim women, the *Kuppayam* a shirt like blouse that covers arm upto wrist and from neck to hip, the instrument *tabala* as taps and the sweet Halwa are from the Arabs. The Unani system of medicine brought by the Muslims is practiced in the district. The Hindu influence in the construction of Pottalpudur Dharga is the presence of circumambulation and a peepul tree. The 1991 Census has returned that the district has a total Muslim population of 110489 males and 11514 females of which 763388 males and 78128 females belong to the urban centres and the rest belong to the rural areas.

Life cycle ceremonies

It is an usual custom among the Tamils that the delivery of the first child will take place in the place of the mother. The Muslims are not an exception to this practice. Upto sixteen days they will observe the pollution days. Naming ceremony for the child will be celebrated in the father's house. Hasarath or Imam will give the name to the child. When the child is in the womb some will take a vow to tonsure the head of the child at a sacred Mosque. This is an acculturation element of the Islamic religion and Tamil culture.

Circumcision

The initiation ritual conducted among the Tamil Muhammadans is called *Sunnath.* It is the removal of the foreskin of the penis. It will be performed after three years of age of the boy .The boy will be made to sit on a copper pot. *Osta* the barber for the Muhammadans will perform the ritual.It is celebrated as a marriage function.

Ear piercing

This ceremony for the female child will be administered after the age of four at the house of the child's maternal uncle.

Puberty

The native term for this ritual is *tanneer uurrutal* literally *Pouring water.* In this ritual *paal cooru'* (milk food) will be distributed to the participants of the ritual. Seven days after the attainment of puberty this rite is performed.

Marriage

Traditionally arranged marriages are held among the Muhammadans. After the initial arrangements have been made the bridegroom's party will go to the bride's house.The villagers will also attend this function. Betel, aricanut , turmeric pieces (without any damage), *Kudumith tengai* (coconut with tuft) in odd number will be exchanged between parents of the bride and bride groom. . Rupees 101 or 1001 will also be exchanged. After receiving the materials the groom's father will pack them in a towel. Only after going to his house he will unfold it. After a few days the bride's party will go and see the groom.

The marriage in the Muslim Community will be celebrated in the bride's house. When the groom comes to the bride's village, he will be taken in a procession to a mosque. The bride's brothers will wash the feet of the groom. This rite is termed as *Kal Kaluvutal* (washing the feet). Then the bride groom will go to the brides house, where he will be placed to sit facing the west, the direction in which *Kahfa* Pallivaasal built at Mecca in the period of Mohammad, the prophet is located.

The Maulvi will serve as the minister of the marriage ceremony. Before the marriage the groom's party must bring a certificate of birth and residence etc., from their village Jamath. Four persons will sign as witnesses for the marriage. After getting the acceptance of the bride, her father will get her signature. Then the *Mehr* the bride price will be paid, to the girl (Rupees 1001 or 501). The *Hasrath* will get the consent and signature of the groom. Then the *Hasrath* will ask the groom the following question (thrice) that is *Kapil nikkaah* (are you consenting for the marriage).

After that a married old lady, who is considered auspicions will tie the *Karukamani*(black beads) in the bride's neck. There will be three strands in the cord in which a golden dollar with reddish coral beads will be linked on both sides. The dollar will be in the size of a hexagon. This gold dollar is called *pucandiram* In another copper wire a coral bead will be linked with it. The poor will wear only the *Karuka mani*, called as *Uppu karukamani*

Only after tying the *Karukamani* the groom can sit by the side of the bride. Then they will be given the milk and fruit an usual custom among the other people also. At this moment people will give *Nikha* to them. The groom's family will pay the money for the bride's village. The bride's family will also pay the money. The groom's mother will not attend these ceremonies.

The nuptial night that is the *Saanthi mukuurttam* will be conducted in the groom's house.The groom's family will host a dinner to the brides family.The bride's family will bring presents to the groom. When they return home they will take the groom with them.

The Mohammedan's of Tirunelveli district, will not marry the mother's sister's daughters and their sister's daughters. Cross Cousin marriage is very common among the Muslims. Marrying the paternal uncle's daughter is a peculiar custom among the Hanafis, in the Tamil context and another peculiar one is marrying the brother's daughter.

Divorce is prevalent in the Muslim community. If there are severe problems among the spouses it will be taken to the Jamath. If it is not solved in the Jamath the husband will utter the word *talak* thrice. Then the break of the marriage bond will be confirmed in writing. The *karukamany* will be removed from the neck of the wife by a *sumangali.* The children will be under the care by the father. Widow marriage and remarriage are in practice among the Muslims.

Death Rituals

At the time of death *Kuran* will be recited. Dead body is called as *maiyam*. Immediately after the death, the lower part of the body will be washed.This is called as *adikaluvutal* .Very often the burial place will be nearer to the *mosque*

The dead body will be washed by pouring the water in which pomegranate and neem leaves are mixed. Washing the body with soap-nut, soap and *rose water* is also usual among them,. During the time of washing the dead body the five *kaleemas* will be recited. Seventeen metre white new clothe will be bought. The clothe will be torn into dothi shirt, head turban and nine pieces. The pieces are used to wipe out the nine holes of the body. The rest will be worn in the parts without any stitch.

These clothes are worn by using five knots. One in the head, one in the feet, one in the hip, another one in the chest and one in the knee. The body will be placed in the *candaak* and taken in procession to the burial ground by reciting, the Kaleema. This is called *Janaathaa.* During the *janaatha* the Ostaa (barber) will carry paddy, bread, dried chillies, tuvaiyal, and appam in a fibre basket to the mosque. Then the candaak will be taken to the *maiyavadi* only by the males. The body will be placed in the *pillaikkuli(small pit)* on a palmyra mat. The body will be laid to rest by placing the head on the south turning the face towards the west.Then the *pillaikkuli* will be closed by placing palmyra sticks on which palmyra mat will be spread. Then it will be filled with sand and mud. Over the pit a semicircular type of figure will be made.At the head side and feet *pirandai* creepers (Tetrastigum) will be planted and the *pathya* (hymns) will be recited. The people who came to participate in the funeral will touch the hands of the bereaved family members and utter the words *'allaha heem sulli allaha'.* Then they will depart.

The next day a ritual named *sutham* (cleaning) will be conducted. The son of the deceased will take date, rice or *aval* in a basket , leaving an equal portion at home; to the graveyard and distribute them to the males who attended the ceremony while women at home will be distributed the date, rice or *aval* left at home. *Pathya* will be recited up to the fortieth day of the death.

Among the Hanaffi's a few customs are observed. If the deceased is a child and that too a first born it will be buried in a corner of the house. If it is an uncircumcised boy a betel leaf will be placed on the penis and the body of the boy will be buried. If the child dies immediately after birth, they will name the dead child and bury it.

Festivals

Bakrid, Ramzan, Muharram, Kantuuri and Sandanakkoodu are some of the important festivals celebrated by the Muhammadans. Kantuuri is a festival in which food will be distributed to the people.

FAKIRSHAS

Fakir means a person who is having nothing.Fakirshas are the followers of Mohideen Andavar. In the name of Mohideen Andavar they will preach the words of Islam. They are considered as the sons of the descendants from Mecca. These Fakkirsha's are believed that they have got the *Upadesa* from the Guru Mohideen. People will do offerings to these Fakkirshas in the name of Mohideen Andavar.

Fakirshas wear green turban in the head, *gandamani* in the neck and have *tashbi* and *aasha* in the hands. On the whole they are having twelve materials for their identity. Kandra Kodali(a small hand axe) woollen

blanket, a rope, tiruchakkaram (an auspicious wheel) *aasha staff* spotted deer's skin, *Kuiya,* peacock fan, *tiruvodu* (holy vessel)a bag on the shoulder) and chappals are those twelve materials. With these materials the Fakkirs will receive the offerings from the people. They use these offerings for their livelihood.

In order to manifest God's power, the Fakirshas will pierce their bodies with sharp rods(*asmathas*), cut with knives and infuse in their head with tirisulas (tridents) as per the advice of their guru. They will perform this in the festivals conducted in the pilgrim centres. *Asmathas* is a sharp needle like instrument On the upper part it will be like a crescent moon, in the lower part it will be like a needle. The fakkirs will pierce it from one cheek to the other or through the tongue.

It is not an usual tradition that the son of a Fakir will become a Fakir. Anybody can become a fakir. In order to become a fakir one will have to undergo some process. *Kaleemas* are the *gurus* for fakiris. After becoming a fakir one can be a kaleema.Formerly fakirs will have to get the *guru Upadesa* for 40 days. During this period fakirs should not see the face of other than the kaleema. They can take milk and fruit as food. The *upadesa* will be conducted inside a screened room.

First the trainee's hair from head to foot will be removed.All the rituals meant for a deceased person will be performed for this trainee. The *Pathya* meant for the deceased will have to be recited on the 7th, 21st and 40th days of *Upadesa.* This will continue for a year. There won't be any difference between the life style of a Muslim and a fakir.

The fakirs will preach the words of god to the people and narrate the historic episodes related to Mohammad Nabi, Four kaleemas, Abiseenhenans (Mohammad Nabi's grand sons'), Fatima Mohideen Andavar and his father and Nakoor Andavar.

Among the Fakir. *Ukkari* is the protector of the property. Bandaari will divide the materials given by the people to them as a mother. Kotwal is a father like figure. Kaleema is king among them. *Subjathu* is the head of them. Kadayanalluur, Tenkaasi, Melappalayam, Keymalapath and Taniyur are some of the places where Subjaatu's are living. Pottalpudur Subjatu is the head of others. The four places religiously very important for the fakirs are Belkonda, Nagoor, Trichy and Pottalpudur.

Marriage, house ceremony and circumcision are some of the occasions in which the fakirs perform their music and songs. The Muhammadans call the Fakirs as *Bava* meaning father. The percussion instrument used by the fakirs is called *Taaira* or *tape.* It is made of five pieces of *aayni* wood or sandal wood.

In the *Pottalpudur dargha* it is fixed that the votaries will have to pay Rs.25 as a gift to the fakirs. The votaries' offerings will be taken in procession to the *dargha* with the accompaniment of the fakir's songs. The votaries also distribute food to the fakirs which is called *tiruvottu annam.*

Pottalpudur dargha and the Athangarai Pallivasal are the most important places for the Muhammadans. Large crowd will visit these worshipping places during the full moon days, on Fridays and Mondays. Muhammadans are followers of the lunar month calendar. From 12.30 p.m to 12.30 a.m is calculated as a day. Every month six important functions are held in Pottalpudur dargha. It is usual to conduct the *Kantuuri* festival in this place. *Santhanak kuudu* is another festival conducted at Pottalpudur. On a full moon day the flag will be hoisted. After ten days another two flags will be hoisted. During that night Sandal paste in a silver pot will be taken in procession from Ravanasamuthiram Melavoor Pallivasal to Pottalpudur. The pot will be taken in procession at night after one 'o' clock.

The Hindus worship in this dargha in large number. In respect to the dargha the non-Muhammadan folk do not sacrifice pigs to Sudalaimadan deity worshiped around the dargha.

Religious conversions

It is the will of the people to follow the religion they like. When the depressed people of the Hindu religion of the district suffered many social restrictions imposed on them by the landlords and the people of upper strata of the society they tended to convert to other religions preferably either to Christianity or Islam. One such mass conversion from Hinduism to Islam occurred in the district in the village called Meenakshipuram in 1981.

FOLK DEITIES

In Tirunelveli district, two types of deities are worshipped: One type is the pan Indian deities and the other is folk deities. Siva, Vishnu, Subramanyan, Ganapathy, Parvathy, Lakshmi and Saraswathy are the first type.

Folk deities[38] are classified into two: Amman and Madan. Mutharamman, Kaliamman, Pathrakaliamman, Ucchiimakaliamman, Vandimalaichiamman, Esakkiamman etc. are the examples of Amman. Sudalaimadan, Pulamadan, Chinnathambi, Muthupattan etc. are Madans.

Some Ammans have legendary or puranic birth stories (see villuppattu). Though these ammans were believed to be born in Kailasa, separate stories are found about their birth. On the fall of a drop of sweat of Parvathi in the sacrificial fire, the one that appeared there was

Mutharamman. Kaliamman and Pathrakaliamman emerge from the eye of Siva. Uchinimakaliamman appears from the blood of Erania, killed by Vishnu. Most of these Ammans are offered blood sacrifice.

Pathrakaliamman, and Uchinimahaliamman are worshipped throughout the region. As these Ammans are born in Kailasa according to traditions , it seems that there is a close relationship between Siva and these ammans. There are legends and beliefs about the death of some Amman Goddess. Esakkiamman is an example of this type.

The temples of the folk goddesses are found often outside the village boundaries; these deities are brought into village only on special occasions. Most of them have faceless images; often objects other than icons, like pots. The priests or poojaris are non-Brahmins. People worship them with fear. They believe that if devotees do not give offerings, they are capable of creating trouble.

There are two types of Madans in Tirunelveli district. The first type of Madans have *birth stories* and the other have *death stories*. Mostly the Madans have no structured temples and the statues are mostly not seen. Instead of statues there will be *peedams* constructed by bricks or clay. In Tirunelveli district, some Madans have temple structure and statues. There are twenty one pantheon deities finding place in folk cult of Tirunelveli district.

Festivals are conducted in these worshipping places once in a year or according to the economic condition of the worshippers. This worship is called *Kodai*. Kodai differs from the festivals held in the temples of pan Indian deities. Villupattu is the central event of kodai. In kodai, making blood sacrifice is mostly in vogue. Goats, cocks and pigs are sacrificed in front of the deity. In the Kodai festival, only those of the community connected with the temple takes part. Even if those of a different community come to see the kodai festival, they will be allowed to be only observers in the rituals connected with the festival.

Kodai festival will be conducted with contribution made by the people of the village. Mostly the festival will be conducted from January to May. These festivals will take place on Tuesdays for female deities and on Fridays for male deities. In kodai festivals people worship the deities with *Pongal* and making offerings. Sacrificial.offer is important. Goats, Pigs and cocks are offered as sacrifice. The professional dancers attending these festivals are referred to as *Chamiyadikal, Chamakontadigal* and *Komarathadigal*.

Villuppattu

In the *Kodai* festival *Villuppattu*[39] (bow-song) is performed ritualistically. Though the Villuppattu texts exist in oral tradition, they have been written in palmleaves and note books too.

A Bow Song (villuppattu) Troop

Villuppattu is variously known as *Villadi and Villadichan Pattu.* Though musical instruments like bow (vil), Pot (Katam), Hand drum (utukku), Cymbal (Thalam), Wooden blocks (Kattai) are used, this art form is known only as Villupattu.

One of the basic constituents of Villuppattu is the performing group. This group mostly consists of five artists. Each one of them plays on the musical instruments and sing. On some occasions one or two more assist them.This group is divided into two types. One is *Valampaadigal* (lead singers); the other is *Itampaadikal* (Chorus singers). Those who play on *kadam, Udukka*i and *Kattai* come within this *idampaadigal* group.

The bow which is used as musical instrument in Villuppattu is unique. It is 10 to 14 feet. in length, mostly carved out of the stem of *Koonthapana*i or bamboo., The bow is shaped linking materials like *Vilkathir, munai kuppigal* (tip hooks) thick rope(vadam), bells (manigal) and rings. The middle part of *Vilkathir* is bound to the pot. Playing on the leather string with *Veesu kol* (beating stick) music is produced. Only the lead singer uses the *Veesukol*.

Pot(கடம்) player is the leader of Chorus singers. This pot is made of clay and is baked in kiln. Its mouth portion is very strong. Holding an instrument resembling the table tennis bat in the right hand and beating below the neck portion of the pot with a wooden piece called *Chothukkattai.*

Villuppattu is sung by raising different types of tunes combining rectangular wooden pieces made of strong *Karunkali* tree and beating instruments made of bronze. The instrument called *ducky* or *thudi* is capable of making musical variations and various rhythms. The body portion of *udukku* is made of bronze and its two sides are covered with animal skin membrane. The special rhythm produced is called *thudukku*. This is indispensable for possessional dance in Villuppattu.

Now a days women also perform Villuppattu. During possessional dance women mostly do not perform. Except for Madathi amman kodai festivel. In the tradition of Villuppattu there are two aspects; one is narration and the other is ritual. These two combine in performance.

The Villuppattu narrations are divided into two: birth story, and death story. Stories telling the history of male deities and female deities are known as *deiva pirani* or *deiva vamsam*. People refer to narrations about death as *vettuppatta vathaikal* or *peippataika*lit. After invoking god at the commencement of Villuppattu, they sing denoting it as so and so's death story, so and so's birth story etc,. Death story is the history of those who lived and died in a region. Birth stories are the myths of male and female deities.

At the commencement of Villuppattu there will be invocation, appeal for protection, humility (Avaiatakkam) and songsin praise of the nation. (Nattu Vazhthu). Villuppattu performance brings the narration to ritual aspect. That is, Villuppattu performed in the ritual festival itself is called kodai. Kodai is a ritual institution.

Ballads

All the folk deities have ballads.[40] Those who read Tamil Folk Ballads will also be able to find the recurrence of different types of basic events and descriptions of this sort. Most of the themes found in Tamil folk ballads are given below:-

1. Appeal to protection (Kappu)
2. Humility in Assembly (Avaiyatakkam)
3. Story abstract
4. Fertility of the country
5. Code of justice
6. Fort construction
7. Pregnancy and delivery
8. Abdication of the child
9. Bringing up of the child by foster parents
10 The life of the child till the eighteenth year
11 Narration of the entire life history
12. Judgment in a case
13. Bringing up some dogs
14. Assigning a cottage to the girls on puberty
15. The hero meeting the heroine
16. Conversation between the hero and heroine
17. The heroine conveying details to the father
18. The hero's mother (or hero) expressing desire to marry the heroine
19. The heroine's father
20. The conditions laid down by the heroine's father to marry the heroine
21. Communicating to the brother or relative the desire to marry the different caste woman.
22. Arrest and escape

23. Fulfilling the conditions laid down by the heroine's father
24. Capture of the heroine
25. Wedding
26. Many women making love to the hero
27. Physical intercourse
28. Illicit relationship
29. The hero staying in the house of a prostitute
30. Feast
31. Procession
32. Passing through different places.
33. Acceptance of the responsibility to protect the country or village
34. An invitation from another king
35. The hero staying in various places
36. Reaching the palace of the king who invited
37. Gift by the king
38. Rupture with king or Zamindar or other countrymen
39 Twelve year drought
40. Some becoming dacoits due to drought
41. Dacoity
42. Dressing up by the hero
43. Receiving or taking weapon
44. Obstructon quoting ill omens or dreams by hero or bad dream by heroine or hero's mother.
45. Over riding
46. Description of the army or telling the name of the soldier in a chain
47. Description of the battle
48. Defeat of the enemy
49. Kidding of the hero
50. Dogs announcing the death of the hero
51. Lamentation
52. Kings' sadness

53. *Sati* lay the heroine
54. Resurrection
55. Tormenting people as spirit
56. Cooling of the spirit's wrath
57. Attaining divinity
58. Blessings
59. Benediction (gracing)

What ever may be the form of the ballad, most of the Tamil folk ballads are based on the above-mentioned themes. These themes are handled by the singer according to the nature of the story and context of performance. This does not mean that all the above-mentioned themes are found in one ballad itself. This does not mean that all those themes are found in a particular ballad in the above-mentioned order alone. These will occur in the ballad according to the story and the mood and convenience of the singer. Linking some of these themes into a bigger one can also be formed. Or a theme can further be divided into many small parts. All these themes will be mentioned according to the social contexts, individual situation and the audience's participation. The singer will select that theme which has very important story. If need be, he can lengthen or shorten it.

Isakkiamman

There are four kinds of idols which depict Isakki in the Tenpandi area: The first one is a figurine of Isakki with an infant held between her teeth. The second one is where Isakki has a child on her hip. In the third variation, Isakki has a child in her mouth and one in her hip. The last variation is one in which Isakki has a child in her mouth and at the same time, one can see her being surrounded by children.

From these variations one can conclude that Isakki is an ambivalent Goddess. The one that holds a child between her teeth is an avenging goddess and at the same time she also acts as a protector of children, which can be deduced from the child on her hip. Also the bow song narrative highlights the avenging aspect of Isakki, if one is not righteous in his ways as regards Isakki, she is found to turn violent. This aspect of Isakki can be found in other Bow songs dedicated to different Isakki's at different places in the area.

In the case of Vannirasan kathai (Vannirasan story), it is said that Vannian stolen from the Nelliappar temple and hid in the Mada street nearby, and was caught there. But there are no temples to be found with Vannirasan as the main deity in the vicinity of Tirunelveli. The nearest that can be found is at Chittoor on the South bank of the river Nambiar, where

a *Peedam* dedicated to Varrirasan can be found. Every year on *Panguni Uthram* day, a *Kodai* (Festival) is celebrated at Chittoor. Moreover, there is ample evidence to argue that Vanniyan was killed on that spot rather than near the Nelliappar temple. So bow songs do have the tradition of superimposing a tale from one area to deities and tales in another area.

One shouldn't conclude that the term Isakkiamman refers to a single Goddess, as there are quite a few Goddesses who go by this name. *Melangottu Isakki, Mavisakki, Thengampudur Isakki, Kulai Vaazhai Isakki* are some of the other names that are found in this region, but they are all distinct. The myths or legends that speak about each of these Goddesses radically differ from one another. Isakki Amman also goes by the name of *Pazhayanur Neeli*. The word *Neeli* in every day speech denotes a termagant. An old proverb says *Neelikku kannir nimaiyile* which refers to a woman who would get things done with her tears and the proverb can be said to have originated from this myth-legend.

The legend goes that once there was a Brahmin who lived with his wife. He had an affair with a prostitute and lost all that he had. So his wife (Neeli) left him, went to her parent's home and lived there. The Brahmin cajoled her to come away with him, promising to mind his way. When they passed through a forest, he killed his wife robbing her of her jewels. The same Brahmin was born a merchant in the subsequent birth. He went to Palayanur on business. Neeli who waited for him in the form of spirit, followed him. The merchant knowing that ghost followed him was scared. The ghost complained to the Velalar that her husband wanted to abandon her and that they should ensure that this did not happen.Though the merchant said that the woman was a spirit, the velalar refused to pay heed to his words and sent Neeli with him. The spirit killed him the very same night and disappeared. The velalar who came to know this the next day,killed himself.

Muthupattan

The story of Muthupattan is a prominent folk tale in the district. Muthupattan[41] was a Brahmin youth who quarrelled with his father and left to seek employment at Kottarakara, under a Malayalee ruler. His talents won him the favours of the ruler and in a few years he became prosperous. Having heard of this, his brothers visited him at Kottarakara and persuaded him to go with them to their native village, get married and settle there. They asked him to pack up his belongings and follow them. Muthupattan agreed to their request and started on his journey. On the way he met two Chakkli maidens and fell in love with them. The brothers tried as well as they could to persuade him to follow them home. He refused, telling them that he would stay in the forest and get married to the Chakkli girls. They attempted to murder him but he escaped alive. He sought the

father of the girls, fell at his feet and asked him to get his daughters married to him. Shocked beyond his wits, the Chakkli chief made evasive replies. He tried to dissuade pattan from his resolve. Unable to ward him off, he enjoins upon him to observe certain conditions which he thought would put sense into the crazy Brahmin and make him give up his resolve. All that was of no use. Pattan promised to fulfil those conditions, a few of them being to renounce the marks of his caste, to tend herds of cows entrusted to the chief's care, to remove raw hide from carrcasses and sell them, to make shoes out of leather, to eat and drink what the Chakklis were accustomed to. The Brahmin youth successfully completed his probation of apprenticeship and married the two daughters of the Chakkli clan. He was entrusted with the charge of protecting the highways between Tamil Nadu and Travancore. Bands of robbers who infested them were thwarted in their efforts to waylay caravans of Tamil merchants. Exasperated, they plotted to murder Muthupattan. They drove away the cows entrusted to him by the villagers on the foot of the mountains and thus provoked a clash. Muthupattan was killed in his attempt to foil their attempt. His two wives burned themselves on his funeral pyre. The people of the region built a temple and installed the images of Muthupattan and his wives and paid homage to them.

Aivar Rajakkal Kathai (Story of Five Kings)

Heroes of folk history are sometimes deified in the places of their birth or activity and their stories are sung when festivals are held in their honour. Thus Aivar Rajakkal Kathai[42] is sung as Villuppattu in certain tracts of the Tirunelveli district. The Kannada king was ruling peacefully at Sheranmahadevi. He sent emissaries to the five Pandyas, ruling at Valliyoor with proposals of marriage of his daughter with the Pandya prince. The proposal having been rejected by the Pandya, the Kannada king invaded his territory, reduced the fortress of Valliyoor, killed the Pandya and his brothers and captured the prince.

Kaniyankuthu

Kaniyan Kuthu[43] is the art form performed as a ritual in the kodai festivals of folk deities in Tamil Nadu's southern districts of Tirunelveli, Thoothukkudi and Kanniyakumari. This art is mentioned as *Kaniyan attam* on the basis of the performer, and *Magudattam* on the basis of the musical instrument used during the performance. This art is performed by those belonging to the caste called *Kaniyan*.

Kaniyan kuthu is in vogue as one of the folk cults of Tirunelveli district. If there is no Kaniyan attam in the worship of Sudalaimadasamy in the cremation ground, Kodai festival will not take place. The people belong to the Kaniyan Caste call themselves *deiva kaniyan* It is worthy of note that the story about the origin of this caste is related to this art.

Kaniyan Koothu Performance, Tirunelveli

Siva refused to accept the *adhurpatham* come out of the *Yaga* performed by Dhakshan to rule the world. The infuriated Siva destroyed the gang of Dhakshan who surrendered to Siva and sought permission to do penance again. Siva promised permission on condition of creating Sudalaimadan and Bhrammarakshasi. Dhakshan peformed the Yaga. At first Bhrammarakshasi (Rakku) appeared from the yaga. Following her Sudalaimadan appeared. He demanded, *I will come only if pooja is done to me in a large scale*. They too agreed. The *Madan told,*

"Will Madan accept pooja

Without hearing the sound of Magude

Will I accept pooja

Without seeing pey muham (ghost's face - a mask used by Kaniyan)

Will Madan accept pooja

Without the arrival of periya Kaniyan"

When Dhakshan and Devas asked Siva to create Kaniyan, Siva ordered that the seven divine ladies should dance before him led by Indrani. They danced before Siva. When the dance was performed Indirani's *Chilampu* broke into pieces and from one piece *kaniyan* appeared with a *makudam*.Siva told him to dance to the satisfaction of Sudalaimadasamy, which he did . As they had descended from deiva kaniyan, the people of the caste call themselves Deivakaniyan. While performing *kaniyan kuthu*, mostly six artistes participate. A lead singer, assistant singer, two makudam players and two men dressed like women and joined together and perform the *kuthu*.

Only the lead singer conduct the *kaniyan kuthu*., He is called *annavi* While performing *kuthu* the lead singer should sing in front of the deity standing in a corner of the space., The gap between the lead singer and the image of the deity will be brooding. During the *kuthu* he is highly respected by the audience and the administrators of the temple. He will sing closing one ear with one hand stretching the other hand and moving it according to the tune. He used to tell *vasanam*(dialogue) in order to lengthen the story.

The song of the lead singer will be followed by the supporting singer. Those getting trained in *kaniyan kuthu* used to be assistant singers of this type.

Magudam is a very important musical instrument in *Kaniyan kuthu*. This *Kuthu* is called *Magudattam* because of magudam. The frame of the *magudam* is made of the wood of *poovarasu* and neem tree. There are

two types of *magudattam.* One is called *mantham* and the other *Uccham.* When *mantham* and *uccham* are played in unison *kuthu* reaches the peak. To the right of the lead singer stands the one who plays *uccham* and to his left the one playing the *mantham*. Those playing *magudam* will have to stand and play. *Magudam* players will play only in tune with the song of the lead singer. The sound of *magudam* will be greater than the sound of *thavil*. Beating the *magudam* the lead singer will sing the lines of *magudam*.

In the performance of *Kaniyan kuthu,* two males play the role of women dancers. Till twenty five years ago there was a rule that the saree and blouse required for the Kaniyan kuthu should be lent by Puthirai vannar (washer men washing clothes only for depressed caste). Now the dancers purchase clothes for themselves. They tie around their leg with *chalangai* (small bells). In folk deity temples *kaniyan kuthu* is performed in the front portion of the temple. The audience will be on both sides in the front portion of the temple.

As *kaniyan kuthu* is a ritual when the story of the temples' chief deity is sung, the audience mostly listen reverently to the story. If procession dance does not come to a particular person at a particular time it is believed that it will come if kaniyan sings . Possession dancers will also dance along with the dancers.

During kodai in *sudalai madan* temple *kaniyan kaivettu* will take place.

Kazhialaattam

The performing art called *Kazhialaattam*[44] is found in Tirunelveli District. On the sea-side, fishermen, in some areas Nadars and in some other areas Muslims perform this art. In this dance, only sticks are important. These sticks are one foot and six inches in length. This is like the *kolattam* played by women. The speed and rhythm of this dance are different from those of *kolattam* by women.

The *Annavi* who teaches *kazhialaattam* has good voice and the capacity to sing songs. Eight people of like physique join in a group and dance according to Annavi's song. They dance wearing head-gear, a piece of cloth round the waist and in bare body. Songs will be sung according to the stick techniques and steps. At the close of every dance, *Thiththom terikuda thiththimi thommana thai* is sung.

A stroke on the stick in the left hand is a stick technique. Bharatham, Ramayanam and kummi songs are sung in *Kazhialaattam.* Christian songs and Islamic songs also are sung by people of the respective religions. This art finds a place in wedding, kodai festival, puberty ritual, house warming ceremony and death.

Oyilaattam

Oyilaattam[45] is one of the arts performed in the southern districts of Tamilnadu. This is an art in which the body is bent like bow and dance performed in tune with rhythm and song. This is a group dance. To perform this atleast twelve people are required including singers and instrument players. (At the most twenty people participate).This art is performed with entertainment as the main focus. This is also performed in temple festivals, wedding, puberty ritual and the visit of important people . This art is performed both in religious and non-religious functions and festivals.

Stories from the epics of Ramayana and Mahabaratha and allied sub-stories constitute the song themes. Similarly, in Christian *oyilaattam* the life history of Jesus Christ and the sub-stories from the scriptures are the songs. All these stories are made into songs and prose suitable to the dance. There are two singers. The lead singer sings the song. The assistant singer will sing close clapping with him with the *jalra* in his hand. The artists in the group also have to sing along with them. In agreement with their tune, there will be beats on baked clay pot. In the present day groups, skin instruments like *thavil* and *mrudangam* are used.

Only the artists taking part in the dance have dress decorations. Dhoti and colourful garment of only one colour are chosen. To enable them to bend the body the present-day groups wear half trousers and banyans. All of them appear in uniform. They used to have a piece of cloth in hand and wear head-gear. Some groups have cloths on two hands. Strings of tiny bells of bronze (Salankai) is worn in the anklets of the dancers.

Artists will stand in two rows one behind the other in equal number with a distance of two feet apart facing the audience. In between the rows only one artist will stand separately in the front. The lead singer will begin a song. The assistant singer will sing along with him beating the *jalra*. After that only the artiste standing at the centre in the front rows will sing. Following that the artistes will sing. Again the person standing at the centre will sing, with gesticulations of the hand the artistes will begin the dance.

At first, the dancing is performed standing in rows, thereafter they turn back. Next they go three steps forward, bend, turn back and revert to the original position. Those of the two rows will stand face to face going a few steps in the opposite direction, they turn and stand face to face.After that, keeping the cloth in hand against the chest, holding it by both hands just like holding a gun they go three feet forward and three feet backward. Thereafter they revert to the original position. This is described as gun

dance. They dance looking at the audience and keeping their right hands on their waists. Signalling with the left hand, moving sideways, that is, three feet to the right revert to the original position. This is called three step dance. Similarly performance will also be done by keeping the left hand on their waists.

At the beginning of the dance, the song and the beat will be uniform and gradually the speed will increase. After reaching a particular speed, the lead singer will blow the whistle .In the same speed the artists will stop the dance. Again it will be resumed slowly. After that, prose will follow or they play kummi standing in a circle. Dancing, waving the cloth in hand, is considered very important here. Stories from the Ramayana constitute the song theme. In the dance, during prose, activities like fight,and arguments will be shown by acting through imitation.

APPENDIX-1

Population Table

Total population - Tirunelveli district - Talukwise.

Taluk	*Total Persons.*	*Males*	*Females*
1901			
Sankarankoil	208542	103945	104597
Tenkasi	174430	86107	88323
Tirunelveli	194647	92358	102289
Ambasamudram	182481	86537	95944
Nanguneri	202512	96662	105850
Kovilpatti	324143	159470	164673
Srivaikuntam	165600	79876	85724
Tiruchendur	206140	99150	106990
1911			
Sankarankoil	228795	113999	114796
Tenkasi	195026	96167	98859
Tirunelveli	211517	100984	110533
Ambasamudram	193406	91759	101647
Nanguneri	209714	98287	111437
Kovilpatti	336706	164848	171858
Srivaikuntam	201899	96872	105027
Tiruchendur	213556	102717	110839
1921			
Sankarankoil	251627	126115	125512
Tenkasi	222488	110325	112163
Tirunelveli	221035	107285	113750
Ambasamudram	195289	94107	101182
Nanguneri	235210	112958	122252
Kovilpatti	347628	170765	176863
Srivaikuntam	215123	104830	110293
Tiruchendur	212996	100130	112866
1931			
Sankarankoil	268080	132888	135192

Tenkasi	249469	123526	125943
Tirunelveli	237205	113042	124163
Ambasamudram	202510	96059	106451
Nanguneri	254549	119267	135282
Kovilpatti	356917	174807	182110
Srivaikuntam	234240	113311	120929
Tiruchendur	237171	111068	126103
1951			
Sankarankoil	319145	158729	160416
Tenkasi	322351	160071	162280
Tirunelveli	294402	143440	150962
Ambasamudram	265046	127756	137290
Nanguneri	802819	144176	158643
1961			
Sankarankovil	335928	167022	168906
Tirunelveli	338015	165679	172336
Tenkasi	335570	166166	169404
Sengottai	66473	32923	33550
Ambasamudram	293586	142242	151344
Nanguneri	325006	154505	170501
1971			
Sankarankovil	257058	127856	129202
Tirunelveli	419005	206802	212203
Tenkasi	392803	194662	198141
Sengottai	76502	37963	38539
Ambasamudram	333960	163451	170509
Nanguneri	378628	179293	194335
Nagari	138775	68666	70109
1981			
Sivagiri	145941	72043	73898
Sankarankovil	282381	140311	142070
Tirunelveli	495038	244791	250247
Tenkasi	450470	223020	227450
Sengottai	84284	42425	42059

Ambasamudram	371847		181271	190576
Nanguneri	393209		187357	205852

1991

Sl. No	Name of PU/VP/TP/MTS		Total Rural Urban	Total population Persons	Males	Females
1.	Tirunelveli		T	2501832	1229902	1271930
			R	1708656	836798	871858
			U	793176	393104	400072
2.	Vasudevanallur	(PU)	T	115851	57495	58256
			R	115851	57495	58256
			U	–	–	–
3.	Sankarankoil	(PU)	T	84771	42313	42458
			R	84771	42313	42458
			U	–	–	–
4.	Kurivikulam	(PU)	T	103839	51157	52682
			R	103839	51157	52682
			U	–	–	–
5.	Melaneelithanallur	(PU)	T	80687	39821	40866
			R	80687	39821	40866
			U	–	–	–
6.	Sengottai	(PU)	T	69730	34908	34822
			R	69730	34908	34822
			U	–	–	–
7.	Tenkasi	(PU)	T	91877	45830	46047
			R	91877	45830	46047
			U	–	–	–
8.	Alangulam	(PU)	T	102769	50672	52097
			R	102769	50672	52097
			U	–	–	–
9.	Keelapavoor	(PU)	T	137415	68512	68903
			R	137415	68512	68903
			U	–	–	–

10. Kadayanallur	(PU)	T	58881	29366	29515
		R	58881	29366	29515
		U	–	–	–
11. Manur	(PU)	T	111388	54901	56487
		R	99001	48633	50368
		U	12387	6268	6119
12. Talaiyuttu	(VP)		6902	3426	3476
13. Sankar Nagar	(PTS)		4533	2383	2150
14. Pettai	(VP)		952	459	493
15. Palayamkottai	(PU)	T	152221	74935	77286
		R	100310	48977	51333
		U	51911	25958	25953
16. Tachanallur	(TP)		18883	9452	9431
17. Naranammalpuram	(TP)		14884	7561	7323
18. Alaganeri	(VP)		1782	867	915
19. Palayamkottur	(VP)		14682	7280	7402
20. Melanattam	(VP)		1680	798	882
21. Ambasamudram	(PU)	T	141012	69565	71447
		R	45373	22429	22944
		U	95639	47136	48503
22. Vikramasingapuram	(TP)		49834	24661	25173
23. Sivanthipuram	(VP)		11912	5894	6018
24. Ambasamudram	(TP)		33893	16581	17312
25. Kadayam	(PU)	T	91827	44780	47047
		R	91827	44780	47047
		U	–	–	–
26. Pappakudi	(PU)	T	67361	32639	34722
		R	67361	32639	34722
		U	–	–	–
27. Cheranmahadevi	(PU)	T	115812	56060	59752
		R	70741	34289	36452
		U	45071	21771	23300

28. Viravanallur	(TP)		25768	12501	13267
29. Nanguneri	(PIU)	T	95286	45255	50031
		R	95286	45255	50031
		U	–	–	–
30. Kalakadu	(PU)	T	91205	43368	47837
		R	77572	37183	40389
		U	13633	6185	7448
31. Eruvadi	(TP)		13633	6185	7448
32. Radhapuram	(PU)	T	107405	51384	56021
		R	90244	43019	47225
		U	17161	8365	8796
33. Tisaiyanvilai	(TP)		17161	8365	8796
34. Valliyoor	(PU)	T	125121	59520	65601
		R	125121	59520	65601
		U	–	–	–
Total Urban			**79316**	**393104**	**400072**
1. Puliyangudi	(M)		53287	26506	26781
2. Sankarankoil	(M)		48846	24532	24314
3. Sengottai	(M)		25820	12916	12904
4. Kadayanallur	(M)		68819	34453	34366
5. Tenkasi	(M)		55189	27223	27966
6. Kuttalam	(MTS)		2242	1150	1692
7. Vikramasingapuram	(TP)		49834	24661	25173
8. Sivanthiopuram	(VP)		11912	5894	6018
9. Viravanallur	(TP)		19303	9270	10033
10. Eruvadi	(TP)		13633	6185	7448
11. Tisaiyanvilai	(TP)		17161	8365	8796
12. Ambasamudram	UA		59661	29082	30579
a. Ambasamudram	(TP)		33893	16581	17312
b. Kallidaikurchi	(TP)		25768	12501	13267
13. Tirunelveli	(UA)		366869	182867	184002
a. Tirunelveli	(M)		135825	68468	67357
b. Palayamkottai	(M)		98399	48434	49965
c. Melappalaiyam	(M)		68347	33739	34608

d.	Tachanallur	(TP)	18883	9452	9431
e.	Naranamma-puram	(TP)	14884	7561	7323
f.	Palayamkottur	(VP)	14682	7280	7402
g.	Talaiyuttu	(VP)	6902	3426	3476
h.	Sankar Nagar	(PTS)	4533	2383	2150
i.	Alaganeri	(VP)	1782	867	915
j.	Melanattam	(VP)	1680	798	882
k.	Pettai	(VP)	952	459	493

PU : Panchayat Union Area
VP : VillagePanchayat
TP : Town Panchayat
PTS : Panchayat Township
MTS : Municipal Township
M : Municipalities
UA : Urban Agglomeration

Source: Census of India, Tamil Nadu, 1991, Population Table

APPENDIX - 2

Survey of Linguistic Peculiarities in Tirunelveli *

An attempt is made in this report to present all those identified linguistic peculiarities found in the different levels of the Tamil speech behaviour of different social to live in different parts of Tirunelveli district. Tirunelveli is one of the southern districts of Tamil Nadu.

This survey mainly concentrates on the Tamil speech of the district. The team of experts surveyed the whole district by selecting some representing areas to collect data for the study of linguistic peculiarities.

With the help of questionnaires, the investigators interviewed various informants representing different social groups in each selected areas. The data consist of word items, paradigms, sentence type, narrations etc. With the help of the data obtained through field survey, the investigators were able to identify a number of exclusive linguistic features as well as those shared features found in the Tirunelveli Tamil dialect. The exclusive isoglosses are mainly considered for the differentiation of dialect boundaries. The report presented below gives an outline of the linguistic peculiarities - in the phonological (including the sound system), morphological and lexical. The inclusive isoglosses which is otherwise known as shared features bring out the impact of social mobility, intergroup interaction, the impact of neighbouring or adjacent areas, the influence of modern social and other type of advancements taking place in the social set up, etc. on language use both formal and informal. In this study, however, only the use of language in the informal level is taken into account.

Tirunelveli Dialect Area

Tirunelveli dialect area is part of the Southern Dialect Area. Of these the Kanniyakumari Dialect Area is quite distinct in the sense, there are a number of exclusive isoglosses, bundles of isoglosses, etc. that differentiate it as a *Focal Area*, from all other dialects of Tamil. However, there is a considerable number of exclusive isoglosses found to be responsible for distinguishing it as a dialect area within the larger area/division viz., Southern speech Area.

There are exclusive isoglosses in all the levels of the language viz., phonological level, grammatical level and lexical level. In the grammatical level almost all the exclusive isoglosses come under the morphological sub-level.

In the phonological level (including the sound system) there are in all 11 isoglosses of which 4 are exclusive, and 7 inclusive.

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* Prof. Dr.S.Agathialingam, Head of the Department of Linguistics, Annamalai University and his team of Linguists conducted this survey exclusively for the Gazetteer.

In the morphological level there are in all 20 isoglosses of which 11 are exclusive and 9 inclusive. In the lexical level there are nearly 250 lexical features that are exclusively found to occur in the Tamil speech behaviour of the Kanyakumari district.

In the following sections a detailed description of all the attested peculiar features have been formalised and the same presented with relevant illustrations.

I. PHONOLOGICAL LEVEL; PECULIAR FEATURES;

A. *Exclusive features:*

An important phonological (sound) feature is the change of R[ ]> t [ ] in the use of the present tense forms. No other Tamil speech variety has this type of usage.

I.A.1.	R> T			
	collukmiRa:n	>	colluta:n	'says-he'
	varuki Ra:l	>	varuta:[1]	'comes-she'
	pa:rkkiRa:rkal	>	pa:kkuta:va	'see-they'
	ceykiRa:n	>	ceyyuta:n	'does-he' etc.

There are other phonological [sound] correspondences which are distinctly found in the Tirunelveli speech variety of Tamil.

I.A.2.	b-	>	V-	
	bali	>	vali	'sacrifice of animals'
	kita: bali	>	kra: vali	'goat offering'

I.A.3. p - > K -

In the initial position of some of the words we find a change from p- > k-.

e.g.puttu	>	kuttu	'ant-hill'

I.A.4. *Initial occurrence of 1- [ ]*

la:ntu	'wander'
le:nci	'kerchief'
lakku	'aim'

B. Inclusive Isoglosses [features]

Tirunelveli being in the Southern region, it shares some of the important phonological features found in the other speech areas like Kanniyakumari district, Madurai-Ramnad districts etc.

There are certain inclusive isoglosses in the phonologicval level shared by this speech [dialect] area alongwith the Kanyakumari and other neighbouring districts.

I.B.1. merger of 1 >/1/ in speech
/1/

The phoneme /i/ [ ] has completely merged with /1/ [ ] in the Tirunelveli district.

e.g.	/palam/	>	/palam/	'fruit'
	/alu/	>	/alu/	'weep'
	/a:lam/	>	a:lam/	'depth'
	/vali/	>	/vali/	'path'

I.B.2. <u>Merger of</u> <u>r</u> <u>> /r/ in speech</u>

In some of the border areas adjacent to Kanyakumari district, we find the pronunciation of /R/ [ ]. part for this, in all other areas /R/ [ ]has completely merged with /r/ [ ] in the Tirunelveli spech varieties.

e.g.	/kaRi/	>	/kari/	'meat'
	/a:Ru/	>	/a:ru/	'river/six'
	/ka:RRu/	>	/ka:ttu/	'air'
	/e:Ru/	>	/e:ru/	'climb' etc.

I.B.3. *Certain other distinct inclusive isoglosses in the phonological level.*

The following are some of the inclusive features found in the phonological level of the Tirunelveli Tamil speech.

3.1. <u>m > V</u>

	manakra katte	>	vanankra katte	'a piece of wood tomake pot'
3,2	<u>v</u>	<u>> m</u>		
	ve:nta:n	>	ma:nta:m	'don't want'
	a:nam	>	ma:nam	'sky'
1.B.4	k-	>	v	
	a:ki	>	a:vi	'having become
	nekam	>	nevam	'nail'
	pake	>	pave	'enmnity' etc

1.B.5	a	>	e	
	kayru	>	keyru	'rope'
	kattu	>	kettu	'tie'
	kattatam	>	kettatam	'building'
	kana:	>	kena:	'dream' etc.
1.B.6	a:	>	e:	
	va:nku	>	ve:nku	'buy"

II. MORPHOLOGICAL LEVEL : PECULIAR FEATURES

a. *Exclusive Isoglosses*

In the grammatical level, the morphologicval features show certain distinct usages. There are several exclusive isoglosses and a few inclusive isoglosses found in the Tamil speech varieties of the Tirunelveli district.

2.A. *Exclusive Peculiar features*

2.A.1 *Occurrence of present tense marker -t-*

This is one of the interesting exclusive features found in this dialect. This is partly responsible for classifying Tirunelveli dialect area from other Tamil dialect Areas. This marker replaces -kiR- marker found in the literary Tamil and -r- marker found in the spoken dialects of all the other areas.

kiR > r > t

e.g.	LT	ST [other areas]	Tirunelveli Tamil
	patikkiRa:n	patikkra:n	patikkuta:n 'reads-he'
	collukiRa:1	colra:[1]	colluta:[1] 'says-she'
	o:tukiRa:rkal	c:tura:nkal [1}	o:tuta:nkap[1] 'run-they' etc.

2.A.2 *Neuter singular pronominal ending - 1*

-1 ` is the neuter singular pronominal ending that occurs in the finite verb forms. This marker is a peculiar feature that distinguishersTirunelveli Tamil speech form other speech varieties of Tamil. This is also an exclusive isogloss.

[-1]	'third person neuter singular' ˜ -1	
e.g.	natakk-1	'walks-it'
	ceyy-1	'does-it'

In these constructions the present tense marker is unmarked.

natakk-o-1	>	natakki	'walks-it'
cey-o-1	>	ceyyi	'does-it';

2.A.3 *Accusative case marker*

The occurrence of the accusative case [2nd case] marker -iye is distinctly found in the Tirunelveli Tamil speech which is considered as an exclusive isogloss to distinguish this dialect area from other areas.

· In addition to this there are other markers also to denote the accusative. These are all inclusive isoglosses.

[-iye]

- -iye

e.g.	enn-iye	'me'
	avan-iye	'him'
	unn-iye	'you'[acc.]

This suffix is mostly found to occur after the -n ending noun stems.

2.A.4 *Neuter Plural Marker*

The occurrence of the neuter plural marker -vo is also an exclusive feature that occurs in the Tirunelveli Tamil; spech. This marker is also partly responsible for distinguishing this dialect area from other Tamil Dialect areas.

[-vo]

-vo

This marker occurs after the demonstrative and interrogative base forms.

a-vo	>	avo	'those-they'
e-vo	>	evo	'which'
i-vo	>	ivo	'these-they'

2.A.5 *Third Person Human pluralmarker*

-vva is the marker that denotes third person human plural informs like avva, ivva and evva. That is, this form occurs after the demonstrative bases a- and i- and interrogative base o-

a-vva	'those-they' [hum.]
i-vva	'these-they 'hum.]
e-vva	'who'

2.A.6 *Third Person Masculine singular marker*

-vam occurs before pause to denote the masculine singular, and occurs after the demonstrative and interrogative base forms.

e.g.	a-vam#	'that-he'
	i-vam #	'this'khe'
	e-vam#	'who'

2.A.7 *Occurrence of -u:te to denote limit*

-u:te occurs as a clitic to represent the meaning 'limit', 'till' etc.

-u:te]

u:te occurs after nouns

atu-u:te >	atu:te	'till that'
u:r-u:te >	u:ru:te	'till the village limit'
etu-u:te >	etu:te	'till which [place] etc.

2.A.8 *Present Negation*

This is formed by the addition of the form -ille to the present finite verb forms.

Pre.Neg. = Pre.F.V. + ille

e.g.	pa:kka:n + ille	'he is not seeing'
	ke:kka:[1] + ille	'she is not asking' etc.

2.A.9 *occurrence of past tense markers -s- and -o-*

-s- and -o- [unmarked] are the two exclusive features that denote past tense in this speech variety -s- ocurs with the verb cey 'to do' and -o- with verbslike.

natunku 'tremble', nakku 'lick' etc.

[-s-]

oo -s- and co -o-

e.g. cey-s-a:[1] > ceysa:'did-she'

natunkuccu	'trembled-it;'
nakkuccu	'licked-it'

2.A.10 Temporal Marker

-iyale is the marker that denotes temporal category and this is a peculiar feature to this dialect.

e.g.	katikiyale	'while biting'
	natakkiyale	'while walking'
	coliyale	'while saying'
	pa:kkiyale	'while seeing' etc.

2.A.11 *Second person plural/honorific singular pronominal termination.*

The Tirunelveli Tamil speech has a distinct marker viz., -iyal to denote the second person pluralor honorific singular in the finite verb forms.

[-yal]

-iyal.

e.g.	vantiyala:	'did you[pl.'hon.sg.] come?'
	conniyala:	'did you [pl./hon.sg.] say?
	po:viyala:	'will you [pl./hon.sg.]go? etc.

2. Inclusive Features in the Morphologicval [Grammatical] level:

There are several inclusive grammatical isoglosses found to occur in the Tamil speech varieties of Tirunelveli district. These features are also found in some of the other dialect areas, especially the adjacent or neighbouring areas.

2.B.1 *Third Person Human plural Termination*

-a:va and -a:ve are the two markers which denote third person human plural [or honorific singular] in the finite verb forms. Of these the form -a:va is found to occur in the Kanyakumari dialect of Tamil.

[-a:va]

-a:va and - -a:ve

Both occur in free variation.

e.g.	vanta:va	
	-vanta:ve	'they came'
	conna:va	
	-conna:ve	'they said'
	ke:kkuta:va	'they ask'
	-ke:kkuta:ve	

2.B.2 *Instrumental case marker.*

-e + vaccu is the instrumental case marker that occurs in the Tirunelveli and Kanyakumari dialects of Tamil. This is an inclusive linguistic isogloss shared by both these dialects.

[-vaccu]

This markers occurs after the accusative form of the noun.

e.g.	kattiye-vaccu	'with the knife'
	maratte-vaccu	'with the wood'
	pe:na:ve-vaccu	'with the pen'

sometimes -vaccu occurs immediately after the noun stem.

e.g.	katti-vaccu	'with the knife
	pe:na:-vaccu	'with the pen'

Sometimes -vaccu occurs immediately aftert the noun stem

e.g.	katti-vaccu	'with the knife'
	pe:na:-vaccu	'with the pen'

2.B.3 *Present tense is unmarked in certain cases:*

In certain case the present tense is unmarked and so it is denoted by -o-. Thisis the feature found in the Kanyakumari Tamil as an exclusive isogloss. However, this feature occurs in the speech behaviour of some people who live in the border areas of Tirunelveli district adjacent to Kanyakumari district areas.

But, in all other cases the preent tense ismarked.

e.g.	cey-o-akku	>	ceyyakku	'for doing'
	col-o-atu	>	collatu	'[one]who says'
	pa:kk-o-a:ve	>	pa:kkave	'they [hum.]see' etc.

2.H.4. *Plural markers*

-al and -01 are the two plural markers found in the Tirunelveli dialect of Tamil shared by the Kanyakumari Tamil speech.

Noun Stem + Plural = Plural form marker

e.g. pulle - [al] > pulleyol/pulleyal 'children'

[o1]

2.B.5 *Negative marker*

-a:nta: [m] is the negative marker that occur after the infinitive form of the verbs like

po:ka-a:nta:[m]	>	po:ka:nta:m	'needn't go'
colla-a:nta:[m]	>	colla:nta:m	'need not tell'

pa:kka-a:nta'[m] 'ned not see' etc.

This type of negative formation is exclusive to Kanyakumari Tamil speech, but due to the impact of this form, in the Tamil speech spoken in the border areas of Tirunelveli district, this usage occurs in the Tirunelveli Tamil dialect also in some instances.

2B.6 *Plural marker:*

-kkama:r[u] is the plural marker that is shared by both the Tirunelveli and Kanyakumari Tamil dialects. This form occurs after certain noun stems only.

e.g.	na:ta:-kkama:t[u]	'people of Nadar caste'
	ca:mba:-kkama:r[u]	people of Harijan community'
	ca:na:-kkama:r[u]	'people of canar caste'

2.B.7 *Second person plural /honorific singular marker*

-iye is the marker that denotes second person plural or honorific singular in the Tirunelveli Tamil dialect. This feature is a shared feature both in the Kanyakumari Tamil speech variety and Tirunelveli Tamil speech variety.

e.g.	vantiye	'you [pl./hon.sg.] came
	ke:ttiye	'you [pl./hon.s.g] came'
	pa:ttiye	'you [Pl./hon.sg.] saw'
	collutiye	'you [Pl./hon.sg.] say'
	po:viye	'you [pl./hon.s.g] will go' etc.

2.B.8 *Conditional Marker*

The marker -a:kki denotes the conditional and it occurs after the past tense form of the verb. This feature is also an inclusive isoglosses, because it is shared by two dialects of Tamil viz., i)Kanyakumari Tamil dialect and [ii] Tirunelveli Tamil dialect.

Conditional form = Verb stem + Past tense + cond.suffix

e.g.	vant-a:kki	'if [one] came
	conn-a:kki	'if [one] said
	cenc-a:kki	'if [one] did' etc.

2.B.9 Loss of neuter singular suffix in the finite verbs

Like all other finite verb forms, neuter singular forms also occur with pronominal endings in all the dialects except the Kanyakumari Tamil dialect, as

vantu	'it came'
pa:ttu	'it saw'

In other Tamil dialects, the corresponding forms are

vantutu	'it came'
pa:ttutu	'it saw' etc.

Though in the Tirunelveli Tamil dialect, the common type is with the pronominal ending like theabove, in some of adjacent border areas to Kanyakumari district, we notice a shift. That is the use of finite verbs [neuter] without the marker -tu to denote the third person neuter singular. In this respect this is also an inclusive isoglosses shared by both the Kanyakumari and Tirunelveli Tamil dialects.

III. LEXICAL LEVEL ; PECULIAR FEATURES

The following are the lexical usages (Vocabulary items] exclusively found to occur in the various speech varieties of Tamil spoken in theTirunelveli district.

The lexical usages are presented in the phonemic order starting with the vowels, along with the meaning [s]

S.No.	Lexical [Vocabulary] item	Meanings
1.	inne	to-day
2.	ivam	this-he
3.	ivo	these-they
4.	i:ra:nkam	onion
5.	i:ruvali	nit-comb
	/e/	
6.	eccikkele	refuse-cater
7.	ettu	oppose
8.	eteykki	in the middle
9.	erakkampo:tu	at the time of ending
10.	evaca:yam	agriculture
11.	e:lum	possible
12.	e:la:me	inablity
13.	e:la:tu	not possible
	/a/	
14.	akki	a kind of skin disease

15.	akkam	all
16.	akku	side
17.	akkara:ti	pride
18.	atevu:ttu	prep;are
19.	ataviya:r	weavers
20.	attakkuli	hell
21.	appalam	blackgram wafer
22.	ampattayyen	barber
23.	an[ku]nakkuli	urinal
24.	ana:cimam	unnecessarily
25.	antu:ripparu	sapend much
26.	antima:nkotte	cashewnut
27.	anta:nekki	immediately
28.	anne	the other day
29.	anna:ru	open above
30.	appa:vi	agent
31.	alantu	disappointed
32.	allu	friter (V) night [N]
33.	arukati	wet land
34.	avutantam	injustice
35.	avam	that-she
36.	avayavangal	body parts
37.	avo	those-they
38.	avva	they
	/a:/	
39.	a:tte	play
40.	a:lka	persons
41.	a:ro	garland
	/u/	
42.	ukku	feel shame
43.	uvaccar	a sect of people
	/u:/	
44.	u:te	in themiddle
45.	u:teye	in the middle
46.	u:li	head
	/o/	
47.	offru	repair

48.	ottanam	fomentation
49.	clampu	confduse
50.	ovale	scandal

/o:/

51.	o:ce	thought
52.	o:ccam	sound
53.	o:tti	grandmother before four generation
54.	o:ra:ttu	sing lullaby

/y/

55.	kinni	buttocks
56.	kiliyancatti	small oil pan
57.	kiruvu	coconut mat
58.	kenakka:	similarity
59.	kele	sub sedct
60.	kacea:ttu	hand message
61.	katakkatu	waste
62.	kattalu	waste
63.	kamale	water lift
64.	kampukku:ru	arm pit
65.	kannika:l	Holy sapling as a pole for marriage
66.	kalinkilu	sluice-weirs
67.	kolavam	adulteration
68.	kalacci	a play
69.	kalavatti	weeding hook
70.	kalava:nu	steel;
71.	kayakappam	bridbe
72.	ka:nka	to see
73.	ka:latte	morning
74.	kotavale	Adam's apple
75.	komme	husk
76.	ko:miyam	cow-urine
77.	kope	fuck
78.	konhtrutoluvu	pound
79.	kolappuravu	

80.	korepa'tu	deficiency
81.	ko:nke	rest
82.	kutimoven	barber
83.	kumpa:	eating vessel
84.	kulicce	tablet
85.	kuluta:ri	water tub for cattle
86.	kuruttuni	dress
87.	ku:talu	chillness
88.	krici	sepal

/e/

89.	cila:nam	remainder
90.	ciruva:tu	graveyard
91.	cecce	temple
92.	cettu	thrift
93.	comma'n	fisherman
94.	commu	fill up
95.	cerappu	a festival
96.	cerumu	cough
97.	cevalu	red-soil
98.	ce:kku	hair crop
99.	canti	obstinity
100.	caturi	shape
101.	cave	chew
102.	cavacci	chew
103.	ca:kum	time of dying
104.	ca:ki	witness
105.	ca:val	cock
106.	co:li	work
107.	culle	kilu
108.	cu:li	pregnancy
109.	cakka:ranma'ru	relatives
110.	conki	dull fellow

/t/

111.	tiruppu'ttu	marriage
112.	tiruna:ru	sacred ashes
113.	ti:ptatlu	menses

114. tenci	time out
115. teratu	mound
116. terale	river of pigs
117. teralam	
118. tela:	man operating water lift
119. tela:n	a kind of weight measurement
120. telukka:	while seed
121. te:ram	time
122. tatayam	foot impresion
123. tattati	terraced roof
124. tadayo	gold
125. tantalu	village announcer
126. tala:salu	front gate
127. ta:ru	goat,big bunch of banana bunches
128. ta:vale	alrighht
129. ta:yi	mother
130. ta:yama:ttu	delay
131. ta:ya:ri	relative
132. tokkam	matter caught in throat
133. toku	weakness
134. tonnama:ru	plead
135. totuve	sheef-hook
136. toratti	crook pole
137. torattu	dispute
138. toli	beat [V] bark, skin [N]
139. tonna:ru	plead
/d/	
140. da:vi	lie
/p/	
141. pica:nam	a seedling season
142. pitittanam	liking
143. pini	disease
144. pe:ruka:lam	family way

145. pakate	cobbler
146. pittti	back
147. pativa:	regularly
148. patakku	a kind of measure
149. patavatu	bush
150. pattu	wet-land
151. patti	village
152. pittare	classification of subjects
153. pammu	hide
154. payata:	wheel
155. parani	killing of pig
156. pa:ni	exaggerate
157. puluvani	insect infecting cattle
158. purutale	suport
159. pu:tta:nkam	secret
160. pu:la:	black bearned feather foil
161. pokku	withered grain
162. pokka:lam	boil
163. potta:liya:r	weaver
164. porani	back biting
165. beli	sacrifice

/m/

166. miruve	weight
168. mettu	fill up
169. mettume	pride
170. meyilu	sunshine
171. me:kka	yoke
172. me:lu	body
173. me;vu	fill up
174. maccinen	cousin
175. manavate	marriage hall
176. mankiliyam	marriage badge
177. mari	waylay
178. mayni	elder brother's wife
179. ma:ccatu	sloth

180. ma:cu:l	produce of the field
181. ma:tte	month
182. ma:ppu	excuse
183. maintu	year
184. ma:lu	hall
185. ma:lu	die
186. ma:y	die
187. ma:vu	mango tree
188. mutuvatu	sunshine
189. muttuppa:tu	difficulty
190. muruvu	overhead
191. mu:ti	unfortunate
192. mu:ta:rkal	anscestors
193. mu:y	make\
194. mokku	eat full
195. mole	black pepper
196. nicuttannai	rice water of last night
197. nitam	daily
198. neme	eyelid
199. nenci	turban
200. nenal	shadow
201.nenalle	not good
202. ne:nitam	vow.
203. ne:mam	prayer
204. ne:rappo:kku	delay
205. ne:rcce	vow
206. nattu	crave
207. natuve	transplantation
208. nattame	standing position
209. navara:	mowque drum
210. nay	wear away
211. na:	I
212. na:la:ntu	day after tomorrow
213. na:vuruvi	thorny plant
214. nompalam	worry
215. none	enter

216. salika:sam		tuberculosis
217. savalepa:di		co-brother
	/r/	
218. ritu		puberty
219. ra:kari		head badge
220. ra:nki		arrogance
221. ra:ve		night
222. ro:ru		lullaby
223. la:ntu		wonder
224. le:nci		hand kerchief [a kind of cloth]
225. lonku		feel shame
	/v/	
226. vitiyatu		dawn
227. vetarppam		sarcastic
228. vencanam	curry	
229. vellana		morning
230. verasi		speed
231. ve:nkiyam	anger	
232. ve:sate		worry
233. vamme		presentation
234. varicanni		hot rice heater
235. varava:si		income
236. va:ra:nkallu		drainage
237. va:varasi		married women
238. ya:ni		beg

IV. LIST OF OCCUPATIONAL VOCABULARY ITEMS;

1. Handloom

tari	loom
tari cottu	loom (a set]
ro:l	roll
ro:l kutti	roll stand
ro:l tantu	roll shaft
pa;vu	warp

pa:vutu kampu	Sticks in between the warp
o:tukatte	
o:tam/	
na:ta	
villu	
tatukku patte	
kuppi	
ro:te	
tla:	
tla:ccakke	
ile va:nki	thread hole
iluppu kayiru	pulling rope
atu kampu	
me:ku:tu	
accu	
kn:ttu palavu	
tantu va:lam	
tarikkuli	loom-pit
miti ppalave	step-plank
kortu	
patamaram	
pataramarakutti	
pata maram cutra kampu	
cundu mole	
palcakkaram	
vilutu	
muntante	
da:vi	design
atteda:vi	cardboard design
ninna:ti	wheen
ninna:tikkutti	
ra:ttu	charka
cu:ve	
pulve:r	
pacepo:tratu	
pa:vu	

co:lu	
u:te nu:l	weft
ta:r	
ta:r pul	
kolal	
me:lci:r	
matuvettu	
ci:ravanti	
ṅerattu [N]	
neratu[V]	to twist
colatti	
cu:ccam	
kanttattu	
kampu	
tovarti	
anta:/paceka:ykra	pa:ne pot for starch paste'
ca:ram	lungi/kayli
ra:ttukku katir	

2. Oil Press

cekka:le	oil mills, name of the caste also
muri te:nkai	one half of the coconut
ki:tt	one pice of kern
elakki [V]	to scoop the kernal
ceratte	coconut shell
koppara	dry oconut-kopra
kayuli	chisel [hand]
kopre uli	chisel [big]
kal cekki	stone milkl [country]
olakke	pestle [n]
kokki	head of the oil mill
kotavale	joint of the mill head
palave	bottom-raft
otta	the part tbhat holds the bottom of the mill
nogo	hoke
kaliyal kuci	sticks in yoke

kayarti	rope
orukuli	the stone mill pit taks 15 kg. dried kopra for one milling
podi [V]	to get ground
punnakki	oil-cake
atikattipunna:kki	cake in the bottom of the mill
are [V]	to get ground
kal	sediment oil
dmagili	"
kampi	iron rod
mulumuri	one-half of a coconut
ka:yvu	dry ness
paruvo	proper maturity
ka:mpal	a kind of rottenness of the oil cake
kadampe	husk
cudi [V]	to burn

3. Pottery

kaytiruval	potter's wheel [small size]
tiruval	potter's wheel' [big]
mantere	heap of clay
manankrekatte	a piece of wood to mould the clay into a pot
terecoi:le	wet cloth
u:ci	needle [wood]
totucati	water pot
tattukal	stone-moulder
tattupalake	wooden plank'
culle	kiln
ca:ta:rom	waste
ve:ka:vari	not burnt properly
minukkal	polishing stone
cantu	straw
cipi kutratu	making designs on the pot
pelakka:tu	won't gain strength

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CHAPTER - 4

AGRICULTURE AND IRRIGATION

Tirunelveli is predominantly an agricultural district. The erstwhile Tirunelveli was an epitome of the whole of the Tamil Nadu, almost every feature of which was repeated on a smaller scale within this little area. This district comprises all types of lands described by Tamil poets in ancient Tamil literature namely Kurinji (hills) land which is found in some parts of Tenkasi and Ambasamudram taluks, Mullai (forests) in Shencottai taluk, Marutham (fields) in Tirunelveli and Ambasamudram taluks, Neithal (Seashore) in Radhapuram taluk and Palai (desert) in some parts of Radhapuram taluk. At the foot of the hills is a tract of good red soil in which fair river irrigation is supplemented by numerous wells. The south consists of rolling plains of red sand, thick with palmyra and thorny bushes, and rich black cotton soil predominates. Between these widely different soils and across the red tract lies a belt of paddy land irrigated by the Tamiraparani river, while studded all over the district are many rainfed tanks. The forests are confined to the western ghats and the plains consist of only scrub jungles. It is in the western ghats that all rivers in the district take their rise. Agriculture in the district, as elsewhere in the semi-arid south, has been created by hands that combine water, soil, seeds, and skill to make the most of precious rainfall. Technologically, two processes over the centuries formed the agrarian landscape in the region. Firstly, people dug and shaped earth to manipulate water, to put surface and subsoil moisture to work. Secondly, they adapted an enormous array of crops, seed varieties, and cropping techniques to exploit the potentials of different soils and variable water supplies. Their recorded history begins only after they learned to grow paddy.

The district is exceptionally diverse in conditions bearing upon agriculture. In the central part of the region, rainfall averages about 76.2 cm. and soils run mostly red sand. Along the base of the mountains a narrow stretch of favoured land receives southwest monsoon rains through the Shencottai Pass and some smaller gaps between the peaks. With low rainfall, natural drainage plays a prominent role in defining agricultural conditions. In this, again, the influence of the ghats stands out. Drainage routes in Tirunelveli not fed from the hills get very little water, so that river and stream beds often sit bone dry for all but a few weeks every year. Many tiny streams do flow down the slopes of the ghats eastward, and these pour water onto land at the foot of soaring hill sides. The only perennial river in the region, the Tamiraparani, out of the most productive rivers in India, has its water source neither in the plains nor on hill sides, but high in the ghats receiving good rainfall during the monsoon. Dropping from peaks to plains in a series of crashing falls, it flows quickly along a nearly flat

bearing plentiful water through a thirsty landscape. There is a belt of rich fertile lands on either side of the river Tamiraparani. Paddy is most the important crop in the belt. Soils by their natural nutrients and water retention properties, perceptibly shaped cropping options.

The Red Soil Region

Wide areas of dry red sandy lands rise from the river valleys, and include the uplands of Ambasamudram and Tirunelveli taluks, the greater part of Nanguneri and much of Sankarankoil. The soil is poor in fertility and lacking facility for river irrigation. Hence dry crops are generally raised; but the area is dotted with numerous rain-fed tanks and small patches of rice fields. Palmyras grow everywhere throughout the tract as the loose sandy soil is suitable to them. Over large tracts of the Nanguneri, acacias (babul), in Tamil it is known as *Karuvel*, are planted along with palmyras. The cereals and pulses, usually raised in rainfed areas are samai, varahu, horse-gram, black-gram, and gingelly. A special crop of this region is the Tirunelveli senna (nilavahai) which is cultivated on wet lands in some of the villages of the Tirunelveli taluk between the pishanam harvest and kar sowing and elsewhere it is raised as a second crop after the main crop on single crop lands has been harvested. An enterprising cultivator can convert his field of less fertile red soil into a valuable garden by testing the farm soils and waters. Based on soil test recommendations tank silt, bulky organics like farm yard manure, compost, pressmud, composted coir waste etc., are applied and green manures are raised and ploughed *in situ* to enrich the soil. Legumes are raised as pure and intercrops, following crop rotation; bio fertilizers like Azospinillum, Phophobacterium, Rhizobium are applied besides application of micronutrients. Drip irrigation system is followed for effective utilisation of water in the water scarcity areas. The picotta or double bullock mhote (Kavalai) is still used in remote areas to lift water from the wells. Oil engines and pumps have been successfully used at Karungulam (Nanguneri), Govindapperi (Ambasamudram) and Chintamani (Sankarankovil). The red loamy soil near Courtallam and a few villages adjacent to it in the Tenkasi taluk is of exceptional fertility and yields two crops every year. During the south-west monsoon, cholam is cultivated in most of the fields, and in the other season, samai, varahu or gingelly form a second crop. Agricultural development depends mainly on the existing resource base quantity and quality, level of its utilisation and the degree of its development. Natural resources like soil, water, climate and forest in combination with human resource form the basis for promotional activities in agriculture. Soil is the important natural resource which mainly decides the cropping pattern of a region. It varies in its colour, texture, fertility etc. The district has been divided into five agro-climate zones taking into

consideration of the soil type, rainfall, temperature etc. Soil types are grouped under five zones. The Panchayat unions which tall under each zone along with the type of soil are given below[1]:-

Zone - I		
Ambasamudram	–	
Cheranmahadevi	–	
Pappakudi	–	River Alluvium
Kadayam	–	
Manur	–	
Palayamkottai	–	
Zone - II		
Radhapuram	–	
Valliyur	–	
Nanguneri	–	Red sandy
Alangulam	–	
Kadayanallur	–	
Zone - III		
Kalakadu	–	
Pavoorchatram	–	
Tenkasi	–	Red loam
Shencottai	–	to Red loamy.
Vasudevanallur	–	
Zone - IV		
Kuruvikulam	–	Black soil
Zone - V		
Sankarankoil	–	
Melaneelithanallur	–	Red Sandy loam
Vasudevanallur	–	

Four major soil types, identified in the entire rice growing tract of Tamiraparani river system are furnished along with the occurrence.

Sl.no. (1)	*Soil series* (2)	*Taluks* (3)	*Extent* (ha.) (4)
1.	Padugai series Tirunelveli	Ambasamudram	18026
2.	Ambasamudram series Tirunelveli	Ambasamudram	16179
3.	Manakkarai series	Tirunelveli	12196
4.	Pettai series Tirunelveli	Ambasamudram	7886

Characteristics of soil series

*Padugai Series*_is of alluvial origin. They are very deep, stratified, very dark grey, medium textured, comparably young and moderately calcareous.

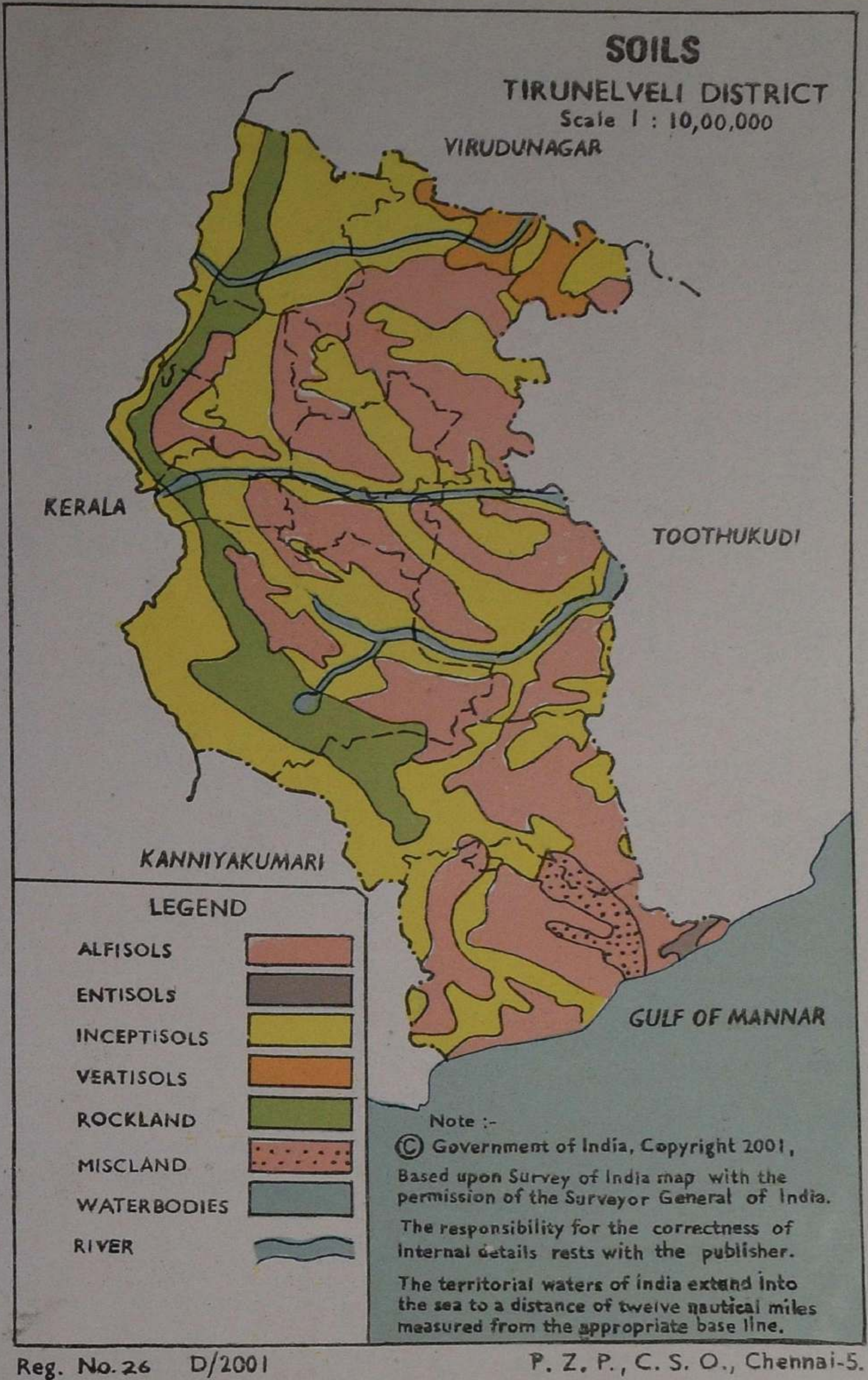
*Ambasamudram series*_is of colluvial origin. They are very deep, dark to very dark greyish brown, medium to heavy textured and non-calcareous colluvial soils. Both Padugai and Ambasamudram series are mostly suitable for paddy cultivation.

Manakkarai series is *in situ* soils. They are very deep, dark greyish brown and medium to heavy textured calcareous soils with many manganese mottling in sub-surface and sub-soils.

Pettai series is like Manakkarai series, *in situ* soils. They are very deep, dark greyish brown non-calcareous (silty clay) and heavy textured *in situ* soils formed from granites. They are suitable for paddy and banana cultivation.

Fertility status: The fertility status of soil in 19 blocks of the district in terms of major nutrients is tabled below:-

Sl.no. (1)	*Name of block* (2)	*N* (3)	*P* (4)	*K* (5)	*Acidity per cent* (6)	*Salinity per cent* (7)	*Alkalinity per cent* (8)
1.	Alangulam	L	M	H	1-15	1-5	1-5
2.	Ambasamudram	L	M	M	31-45	1-5	–
3.	Cheranmahadevi	L	M	H	45	1-5	1-5
4.	Kadayam	L	M	H	1-15	1-5	1-5
5.	Kadayanallur	L	M	H	–	1-5	1-5
6.	Kalakadu	L	H	H	1-15	1-5	1-5



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Map Reproduced as per the information furnished by the Indentor.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
7.	Keelapavoor	L	M	H	–	1-5	6.10
8.	Kuruvikulamn	L	M	H	–	9	
9.	Manoor	L	M	H	1-15	1-5	1-5
10	Melaneelithanallur	L	L	H	1-15	–	1-5
11.	Nanguneri	L	M	M	1-15	6-10	1-5
12.	Palayamkottai	L	M	H	1-15	1-5	1-5
13.	Radhapuram	L	M	H	1-15	6-10	6-10
14.	Sankarankoil	L	M	H	1-15	6-10	1-5
15.	Seydunganallur	L	M	H	1-15	1-5	6-10
16.	Shencottai	L	M	H	16-30	1-5	1-5
17.	Tenkasi	L	M	H	16-30	1-5	1-5
18.	Valliyoor	L	L	H	1-15	16	6-10
19.	Vasudevanallur	L	M	H	–	1-5	1-5

N = Nitrogen P = Phosphorus K = Potash

L = Low M = Medium H = High

Crop Suitability

Sl.no.	Sub soil group	Crop suited Irrigated	Dry
(1)	(2)	(3)	(4)
1.	Typic Ustipsamments	Coconut	Palmyra
2.	Typic Ustorthents	Flower crops	Millets
3.	Paralithic Ustorthents	Groundnut	Millets
4.	Typic Ustropepts	Paddy, Banana	Pulses, Millets
5.	Fluventic Ustropepts	Paddy, Banana	Millets
6.	Vertic Ustropepts Sorghum,	Chillies Pearl millet	Cotton
7.	Typic Haplustalfs	Paddy, Banana	Millets, Pulses, Cotton
8.	Udic Haplustalfs Banana	Paddy, Sugarcane Pulses	Cotton, Millets
9.	Aquic Haplustalfs Sugarcane, Betelvine	Paddy, Banana	---

10.	Udic Rhodustalfs Groundnut	Paddy, Banana, Orchard crops	Groundnut
11.	Typic Chromusterts Blackgram	Chillies, Coriander, Pearl millet	Cotton, Sorghum, Coriander, Chillies
12.	Entic Chromusterts Blackgram	Chillies, Coriander, Pearl millet	Cotton, Sorghum, Coriander, Chillies
13.	Lithic Ustorthents	Pasture	Millets, Groundnst
14.	Lithic Ustropepts	Pasture, Groundnut	Groundnut
15.	Typic Rhodustalfs Coconut, Orchard	Banana, Vegetables Pulses crops	Groundnut, Millets
16.	Vertic Haplustalfs Chillies	Paddy, Cotton, Groundnut	Millets, Sun flower
17.	Paralithic Ustropepts Vegetables	Flowers, Pastures	Groundnut, Millets

Soil sub groups, their extent and percentage

Sl.no.	*Soil sub group*	*Area (in ha)*	*Percentage*
(1)	*(2)*	*(3)*	*(4)*
1.	Typic ustropepts	105373	19.33
2.	Typic Chromusterts	33374	6.12
3.	Typic Haplustalfs	26033	4.78
4.	Udic Rhodustalfs	22164	4.07
5.	Aquic Haplustalfs	19691	3.61
6.	Paralithic Ustorthents	12751	2.33
7.	Typic Ustipsamments	10399	1.91
8.	Vertic Ustropepts	9094	1.67
9.	Typic Ustorthents	7338	1.35
10.	Udic Haplustalfs	3747	0.69
11.	Entic Chromusterts	2015	0.37
12.	Fluventic Ustropepts	1954	0.36
13.	Lithic Ustorthents	1686	0.31
14.	Lithic Ustropepts	362	0.07
15.	Typic Rhodustalfs	361	0.07

(1)	(2) (3)	(4)	
16.	Vertic Haplustalfs	120	0.02
17.	Paralithic Ustropepts	80	0.01
18.	Typic Ustropepts Typic Haplustalfs	91538	16.79
19.	Paralithic Ustorthents Lithic Ustorthents	36655	6.74
20.	Paralithic Ustorthents - Paralithic Ustropepts	33722	6.18
21.	Paralithic Ustorthents- Typic Ustropepts	27593	5.06
22.	Paralithic Ustropepts Typic Ustropepts	21320	3.91
23.	Typic Ustropepts Udic Haplustalfs	14101	2.59
24.	Paralithic Ustorthents- Lithic Ustorthents Typic Ustropepts	11567	2.12
25.	Typic Ustropepts - Udic Rhodustalfs	6836	1.25
26.	Typic Ustropepts- Paralithic Ustorthents Typic Haplustalfs	6187	1.13
27.	Udic Haplustalfs Typic Ustropepts Udic Rhodustalfs	5882	1.08
28.	Typic Ustropepts Paralithic Ustropepts	4260	0.80
29.	Typic Ustropepts Paralithic Ustorthents	4079	0.75
30.	Typic Haplustalfs Typic Ustropepts	3425	0.63
31.	Typic Ustropepts Paralithic Ustropepts	3132	0.57
32.	Vertic Ustropepts Vertic Haplustalfs	3032	0.56

(1)	(2)	(3)	(4)
33.	Paralithic Ustorthents Lithic Ustorthents Typic Ustorthents	2485	0.46
34.	Udic Rhodustalfs Typic Ustropepts	2352	0.43
35.	Typic Ustropepts Vertic Ustropepts	1863	0.34
36.	Paralithic Ustorthents Typic Ustropepts Lithic Ustorthents	1688	0.31
37.	Typic Ustropepts Paralithic Ustorthents Lithic Ustorthents	1570	0.27
38.	Typic Rhodustalfs Typic Ustropepts	1450	0.27
39.	Typic Ustropepts Lithic Ustorthents	1249	0.23
40.	Udic Haplustalfs Typic Ustropepts	1000	0.18
41.	Udic Rhodustalfs Udic Haplustalfs	610	0.11
42.	Typic Chromusterts Vertic Ustropepts	610	0.11
43.	Lithic Ustorthents Typic Ustropepts	200	0.04

Report, dated 4th October 1993 from the Assistant Agricultural Chemist, Soil Survey & Land Use Organisation, Tirunelveli.

Land utilisation

Most of the soil types identified in the district are subjected to varying degrees of sheet and gully erosion. Thereby the fertile top soil is lost resulting in poor crop growth. In some places of the soils like Paralithic Ustorthent and Lithic Ustorthent, erosion is so high leading to the exposure of rocks rendering the soil unsuitable for cultivation with implements. To overcome the ill effects of soil erosion and surface run off, the following measures are taken: (a) construction of series of ring bunds along the contours to retard the speed and surface run off of the rain water, (b) laying out contour plots

in the highlands and keeping them under vegetational cover, (c) erecting series of gully plugging devices in order to minimise the speed and action of run off and reduce the rate of land breach, (d) broad based beds on ridges and tie ridging will be effective for the red and brown soils, (e) crop growing in ridges and furrow system will prevent run off loss, (f) In soils like Typic chromustert, Entic Chromustert and Vertic Ustropept ridges and furrow system is more effective in conserving the rain water by enhanced infiltration rather than conventional contour bunding, (g) application of gypsum to black soils like Typic Chromustert would reduce the exchange sodium percentage and would enhance the water intake. (h) Mulching with crop residues at regular interval would minimise the moisture loss, (i) graded border strips with 0.1 per cent grade is effective in increasing moisture recharge and yield in deep red soils like Typic Rhodustalf and Udic Rhodustalf, and (j) run off water can be collected into farm ponds and used for irrigation at critical stage of germination.

Soils like Typic Chromustert, Entic Chromustert, Vertic Ustropept and Vertic Haplustalf are affected by moderate to severe alkalinity. This problem is due to lack of sufficient drainage facilities and poor water irrigation. The soils can be reclaimed by improving the drainage system, increasing the infilration by mulching, choosing suitable varieties of crop and by application of soil amendments like gypsum. Green manure crops like daincha can be grown and ploughed *in situ* to minimise the alkaline condition. Soils like Typic Chromustert, Entic Chromustert, Vertic Ustropept and Vertic Haplustalf affect the stability of any engineering structure put up on them due to the smetitic type of clay mineralogy in the soils which have swelling and shrinking characters. Acidity of Udic Rhodustalf and Typic Rhodustalf and other laterite soils have Corrosive action on the engineering structure of steel and iron.

Land Reclamation

An agricultural engineering wing was formed in 1946 in the Agriculture Department under the Grow More Food Programme. Bulldozers obtained as army disposals of the Second World War, tractors, implements and oil engines were provided to farmers on hire basis to utilise for land reclamation. Soil and water conservation works were taken up at the end of 1949 under the Famine Relief Programme. In 1958, the pumping and boring activities were transferred from Industries department to the agricultural engineering wing. With a view to conserve, manage and develop land and water resources of the State, the agricultural engineering wing was with a view to be utilised for better purposes, formed as a separate department after bifurcating from Agriculture Department in 1981.

Agricultural Engineering Department is engaged in protection of soil from erosion hazards and conservation of moisture. It creates new irrigation

facilities stabilises existing irrigation sources, provides agricultural machinery for land reclamation and mechanised cultivation optimises water use through micro irrigation systems; develops degraded lands for sustainable agriculture and adopts Remote Sensing Technology for assessment of land and water resources. It is engaged in water management in river commands and tank ayacuts. The department also takes up massive employment generation programmes to provide rural employment by constructing water harvesting structures, renovating minor irrigation, panchayat union tanks and temple tanks. Drought relief and flood relief measures are the other tasks which have been assigned to the department. The department has started using Remote Sensing data and cartographic computer systems.

Soil Conservation in hills and plains

The district is subjected to soil erosion and land degradation problems which are solved by execution of soil and water conservation programmes. The soil moisture regime of the dry lands is improved by several measures under the scheme. Farmers are provided with a subsidy at the rate of 25 per cent and 40 per cent on cost of works in plains and hills respectively. The balance amount is treated as loan and recovered in 10 equal annual instalments after a moratorium period of two years from the year of completion. The Hindu Adi-Dravidar farmers are provided with a higher percentage of subsidy i.e. 50 per cent.

Wind Erosion Control Scheme

Since the year 1978 the Wind Erosion Control Scheme which is to prevent soil erosion and sand deposition is in operation in the district. Vegetative barriers known as shelter belts are raised perpendicular to the direction of wind to prevent wind erosion. Shelter belts consists of five rows of trees planted across the direction of wind to form conical shape (in the side view), and are raised at horizontal intervals of 120 metre. The high velocity wind on meeting the shelter belt glides over the trees and before the wind is about to touch the ground once again it has to encounter the next successive shelter belt. The velocity of wind is thus reduced by raising shelter belts successively across the direction of wind and erosion due to the wind is thus prevented. Borewells fitted with handpumps are erected at an interval of one pump per km. of shelter belt for watering the trees. The shelter belts are maintained for a period of five years. The cost of raising shelter belts and their maintenance are fully met by Government on hundred per cent subsidy basis. An extent of 6828 ha. were protected by shelter belts in 1993-94 in the district under this scheme.[2]

Details of area covered and financial achievements under wind control scheme from 1978-79 to 1993-94

Sl.no. (1)	*Year* (2)	*Area covered* (in ha.) (3)	*Length of shelter belt* (in km.) (4)	*No. of borewells* sunk (5)	*Financial achievement* (Rs. in lakhs) (6)
1.	1978-79	658.175	36.007	9	0.738
2.	1979-80	676.010	37.521	12	2.690
3.	1980-81	348.975	20.667	10	5.340
4.	1981-82	583.210	31.880	18	9.942
5.	1983-84	245.730	13.500	9	4.783
6.	1984-85	237.920	16.942	9	7.689
7.	1985-86	142.715	8.232	5	3.460
8.	1986-87	290.660	21.906	18	10.594
9.	1987-88	350.050	27.476	25	13.778
10.	1988-89	570.040	45.214	44	21.092
11.	1989-90	566.570	46.240	44	19.131
12.	1990-91	508.810	40.898	41	17.862
13.	1991-92	512.555	42.261	42	20.147
14.	1992-93	555.955	46.205	46	22.732
15.	1993-94	581.000	48.364	42	10.714

Under the wind erosion control scheme, an area of 658.175 ha. were covered in the composite Tirunelveli district in 1978-79 which increased to 676.010 acres in 1979-80. Subsequent years witnessed fluctuations in area covered and in the year 1986-87,(in 1986 the Tirunelveli district was bifurcated into Tirunelveli and Toothukudi Districts), the area covered was 290.5660ha.; in 1987-88 it was 350.050 ha; 570.040 ha. in 1988-89; 566.570 ha. 1989-90; and 581.000 ha. in 1993-94.

The length of shelter belt raised in 1978-79 was about 36 km. and thereafter the length of the shelter belt raised witnessed fluctuations in 1979-80, it was 37.521 kms. 20.667 kms. in 1980-81; 31.880 kms. in 1981-82; 13.500 kms. 1983-84; 16.942 kms. in 1984-85; and 8.232 kms. in 1985-86. From the year 1990-91, the total length of the shelter belt raised showed an increase figure of 40.898 kms in 1990-91, 42.261 kms in 1991-92; 46.205 km in 1992-93 and 48.364 kms. in 1993-94. In

1978-79, the number of borewells sunk was doubled to 18 in 1981-82 ; 25 in 1987-88; 44 in 1988-89; and 46 in 1992-93.

Soil and Water Conservation under Western Ghats Development Programme

Under this programme afforestation, contour stone walls and construction of silt detention tanks, are adopted. Farmers are provided with 50 per cent subsidy on cost of works and the rest is treated as loan to be recovered in ten equal annual instalments after a moratorium period of two years.

Land development: The Agricultural Engineering Department hires out bulldozers and tractors to farmers to carry out land levelling, land shaping and mechanised cultivation operations under this scheme. For this purpose, this department maintains 10 bulldozers and six tractors in the district.

Minor Irrigation: The area under "well irrigation" is on the increase and ground water development assumes more importance. The Agricultural Engineering Department helps the farmers in locating the wells through Geo-physical surveys and construction of tubewells, filter point tube wells and revitalisation of dried up wells; The department maintains a fleet of five percussion drills, one calyx drills, one hammer drills, two wagon / Inwell drills, three rock blasting units, seven long hole equipments and five hand boring sets in the district. The Hindu Adidravidar farmers get these machines at 50 per cent of the normal hire charges and are further eligible for 50 per cent subsidy on ground water survey, transport, labour charges, raw materials, H.S.D. oil, cost of pipes, explosives and well development charges. Drip and sprinkler systems are encouraged for economical usage of water and better water management. Under the special foodgrain production programme, the Agricultural Engineering Department provides subsidy for sinking of tubewells deepening of wells and boring in wells revitalisation of wells to small, marginal and tribal farmers. Under Jawahar Velai Vaippu Thittam, construction of percolation ponds, renovation of temple tanks and standardisation of minor irrigation Panchayat union tanks are taken up. Percolation ponds facilitate ground water recharge, generate employment and serve as multipurpose community asets. DANIDA assisted comprehensive watershed development project is in operation from 5th October 1990 in the district. The project's objectives are arresting further erosion of badly degraded lands in priority areas of the district.

Developing a sustainable and cost-efficient utilization of several types of land, presently classified as cultivable waste and marginal agricultural land and creation of long term employment opportunities for farmers. The project Phase - I of which was completed in 31st March 1994, is in operation in Tenkasi; Tirunelveli; Ambasamudram and Radhapuram taluks. The land reclamation and soil conservation works are executed by the Soil

Conservation Sub-division at Tirunelveli, which undertakes water resources development works, installation of drip/sprinkler irrigation systems and flood and drought relief works in the district too. The details pertaining to land reclamation works and protective bunds to protect crops, soil erosion control schemes undertaken from 1962-63 to 1993-94 are given in *Appendix - 1.*

Land Use Pattern

The area under forest in the year 1991-92 was 122055 ha. which increased to 122435 ha. in 1994-95. Barren and uncultivable waste occupied 27191 ha. in 1991-92 which had slightly decreased to 27033 ha. Land put to non-agricultural uses showed an upward trend in 1994-95 over 1991-92. It was 96291 ha. in 1991-92, 97921 ha. in 1992-93, 99086 ha. in 1993-94 and 99157 ha. in 1994-95. The area under cultivable waste showed a mixed trend between 1991-92 and 1994-95. The area was 79243 ha. in 1991-92 which decreased to 71131 ha. in 1992-93, 72197 ha. in 1993-94 and 70281 ha. in 1994-95. The area under grazing land showed a changing area of 9851 ha. in 1991-92; 9807 ha. in 1992-93 and 9266 ha. in 1994-95. The area under current fallows in 1991-92 was 14267 ha. in 1992-93. It increased to 18526 ha. 18582 ha. in 1993-94 and 26504 ha. in 1994-95. The area under other fallows showed a mixed trend of 122669 ha. in 1991-92; 158607 ha. in 1992-93, 151845 ha. in 1993-94 and 1,45,848 ha. in 1994-95. The net area sown was 151758 ha. in 1991-92; 168670 ha. in 1992-93.

The net area sown was 172261 ha. and 172694 ha. in 1993-94 and 1994-95 respectively. The area under forest is maximum in Ambasamudram taluk followed by Sivagiri and Shencottai taluks. The forest is almost nil in Sankarankoil taluk. Area under barren and uncultivable land, cultivable waste, permanent pastures and other grazing lands and land under miscellaneous tree crops and groves not included in the net area sown acounted for over 11per cent of the total area. It varied from 1.25 per cent in Sankarankoil taluk to 23.62 per cent in Nanguneri taluk. The percentage is high in Tirunelveli and Ambasamudram taluks. The Land Utilisation particulars from 1990-91 to 1995-96 are given in *Appendix - 2.*

Land use pattern in the district was as follows:

Sl.no.	*Land use pattern*	*Area (in ha.)*
1.	Forest	122055
2.	Barren and uncultivable waste	27191
3.	Land put to non-agricultural uses	99086
4.	Permanent pastures and other grazing lands	9807
5.	Topes and other grooves	9284

6.	Current fallows	18582
7.	Other fallows	151845
8.	Cultivable waste	72197
9.	Net area cultivated	172261
	Total area	**682308**

Cropping Pattern

Though Tirunelveli has fertile soils only in scattered regions, it has a predominantly agricultural economy less fertile red soils are found distributed over most of the region. The network of the irrigation system makes full use of the water resources, the natural deficiency has been overcome to a greater extent. The cropping pattern of the district is essentially of the type characterising dry regions. It normally varies from taluk to taluk *vis-a-vis* region to region. Wet cultivation is essentially paddy cultivation and the major share of the gross cropped area is under one crop. In dry regions, diversified cropping patterns exist and no single crop claims a large share of the gross cropped area. Dry cultivation which characterises these regions is also basically millet and cash crop cultivation since paddy depends largely on water availability. Even in dry regions wherever water is available, it is the paddy crop that is sown by the farmers. Paddy occupies the largest area of cultivation, followed by Cotton. Paddy is cultivated mainly in Sankarankoil, Tirunelveli, Tenkasi, Shencottai, Ambasamudram and Nanguneri taluks. Paddy grows best in high temperature and abundant moisture zones and in fields which can be flooded at certain stages of its growth.

Other crops grown in the district are cumbu, cholam, ragi, pulses, groundnut, gingelly, coconut, chillies and indigo. Portions of Sankarankoil taluk have the rich, fertile black soil which are highly suitable for cotton cultivation. Cropping pattern, prior to the nineteenth century, could not be changed due to illiteracy and the traditional attitude of the farmers but the change of time causes the change in attitude. Factors such as type of soil, climatic conditions, irrigation facilities etc., determine the cropping pattern in a region. In Tirunelveli District, two main cropping seasons namely the Kharif (from June to September)and the Rabi (from October to February) exist. The former is known as first crop and also kar crop and the Rabi crop is known as the second crop and also pishanam crop. Both dry as well as irrigated cultivation are common in the district. Most of the rainfed areas are cultivated in both the seasons. Most of the crops are on the ground for three or four months except chillies and cotton which take more than five months.[3]

Maize is also cultivated in small areas. The area under paddy in 1984-85 was 40358.15 ha. which decreased to 37311.61 ha. in 1985-

86; 23932.42 ha. in 1986-87. In the year 1987-88, the area under paddy was 35284.90 ha. which increased to 41036.83 ha. in 1990-91; 42739.78 ha. in 1992-93 and 41710.24 ha. in 1993-94. The area under cholam in 1987-88 was 2586.81 ha. and the subsequent years there were fluctuations in the area under cultivation. The respective years 1990-91, 1991-92, 1992-93 and 1993-94 the area under cholam was 2119.79 ha, 2184.54 ha, 1568.60 ha, and 1990.29 ha. Cumbu was grown in 1007.69 ha. in 1987-88 which showed fluctuation between 1988-89 and 1993-94. In 1992-93 it was 555.24 ha. and in 1993-94 cumbu was grown in 607.45 ha.

Blackgram is the important pulse crop of this district. It is the major crop in areas benefited by Tambraparani river system. The area under blackgram in 1987-88 was 10547.15 ha. which showed a decreasing trend in 1988-89 and 1989-90. In 1990-91, the area under blackgram stood at 10852.29 ha. and in 1993-94 it was 11134 ha. Next to blackgram, greengram is cultivated in large areas followed by cowpea, horsegram etc. Sugarcane, groundnut, gingelly and sunflower are the other important crops cultivated in the district. Cotton is one of the major non food crops grown mainly in Sankarankoil and Sivagiri taluks. The area under cereals is more in Tirunelveli, Ambasamudram and Sivagiri taluks. Among cereals, paddy is extensively grown in Shencottai, Sivagiri, Tirunelveli, Nanguneri and Ambasamudram taluks. Paddy is grown during first and second seasons in the Tamiraparani river system. Cumbu is mostly grown in the dry tracts of Sankarankoil taluk and formed the major cereal crop in the taluk. Chillies an important crop next to cereals and pulses, are largely cultivated in Tenkasi, Sankarankoil taluks. Though all the taluks have certain areas under fruits and vegetables, the distribution is not equal. The areas are concentrated in Tenkasi and Nanguneri taluks. Banana is grown extensively in Nanguneri taluk. While mango and citrus are more in Tenkasi taluk. Area under cotton is more in Sankarankoil taluk and minimum in Ambasamudram and Tirunelveli taluks. Cotton is mainly raised as a rainfed crop. The concentration of oilseed crops like groundnut, coconut and gingelly are seen in Tenkasi taluk.The area under major and subsidiary crops from 1984-85 to 1993-94 is given in *Appendix - 3.* The particulars on the yield of major crops during normal years are given below:

1.	Paddy	–	6000 Kg/Ha.
2.	Cholam	–	3000 Kg/Ha.
3.	Cumbu	–	3000 Kg/Ha.
4.	Ragi	–	3000 Kg/Ha.
5.	Maize	–	5000 Kg/Ha.
6.	Minor millets	–	1250 Kg/Ha.

7.	Redgram	–	1500 Kg/Ha.
8.	Blackgram	–	1500 Kg/Ha.
9.	Greengram	–	1800 Kg/Ha.
10.	Gowpea	–	1500 Kg/Ha.
11.	Horsegram	–	750 Kg/Ha.
12.	Bengalgram	–	500 Kg/Ha.
13.	Cotton	–	20 Qtl/Ha.
14.	Sugarcane	–	12 MT/Ha Gur.
15.	Groundnut	–	2800 Kg/Ha.
16.	Gingelly	–	750 Kg/Ha.
17.	Sunflower	–	1300 Kg/Ha.
18.	Casior	–	900 Lg/Ha.
19.	Soyabeens	–	2000 Kg/Ha.

Yield of major crops during normal years

Some of the major crops such as paddy, cholam, cumbu, ragi, maize, minor millet, redgram, blackgram, greengram, cowpea, groundnut, gingelly, sunflower, soyabeans are cultivated in various parts of the district. Paddy is the first major crop cultivated in the district followed by maize, cholam, cumbu, ragi, groundnut, soyabeans, greengram, red gram, black gram etc.The normal yield of paddy is 6000 kg/ha. The yield of cholam, cumbu, and ragi is 3000 kg / 1 ha. each. The yield of groundnut is 2800 kg / ha. and soyabean is 2000 kg / ha. Under pulses, the yield of greengram is 1800 kg / ha. followed by redgram, blackgram, and cowpea which is 1500 kg. / ha. each. The yield of sunflower is 1300 kg / ha. Under commercial crops, the yield of cotton and sugarcane is 20 qtl. / ha. and 12 MT. / ha. respectively. Horsegram, Bengalgram, gingelly and other millets are grown in the district[4] The following table shows the cropping pattern during different seasons in both irrigated and unirrigated Lands.

Cropping pattern during different seasons in various lands

Sl.no.	*Crop*	*Irrigated / Rainfed*	*Season*	*Area in Hectares*
I.	Paddy	Irrigated	June - September	28000
			Oct. - February	72000
II.	*Millets:*			
	Cholam	Irrigated	Dec. - January	1000
			April - June	1000

Sl.no.	Crop	Irrigated / Rainfed	Season	Area in Hectares
		Rainfed	Sep. - November	1600
			April - June	1500
2.	Cumbu	Irrigated	April - June	2000
		Rainfed	Sep. - November	3000
	Ragi	Irrigated	June - October }	
		"	Feb. - May }	4000
	Maize	Rainfed	Sep. - November	2000
	Minor } Millets }	Rainfed	Sep. - November	1000
III.	*Pulses:*			
	Blackgram			
	Greengram	Irrigated	June - July	3000
	Cowpea, etc.	Rainfed	Sep. - October	20000
IV.	*Oilseeds:*			
	Groundnut	Irrigated	Dec. - February	10000
		Rainfed	Sep. - November }	
			April - June }	5000
	Sunflower	Rainfed	Nov.. - January	2000
	Gingelly	Rainfed	Nov. - February	4000
	Coconut	–	---	10953
V.	Fibre Cotton	Rainfed	Sep. - February	8800
		Irrigated	Sep. - February	12000
			Feb. - June	
VI.	*Other crops:*			
	Sugarcane	Irrigated	Jan. - December	1500
	Chillies	Irrigated	March - July	

Rotation of crops

Rotation of crops is defined as cultivating a certain number of crops in a regular sequence on the same land during a certain period. Crop rotation help in maintaining the fertility of the soil by controlling and regulating the demand of fertilisers in the soil and enriches the soil nitrogen and humus especially when legumes are grown in rotation and ploughed. Rotation of crops also minimises the soil erosion, helps the conservation of moisture and gives a better distribution of work. It reduces the risk of crop failure due to adverse weather conditions. The common rotation of crops followed in the district is as follows:

Wet lands :

1.	Paddy	-	Groundnut	-	Paddy
2.	Paddy	-	Pulses	-	Paddy
3.	Paddy	-	Pulses	-	Paddy

Drylands :

1.	Cumbu	-	groundnut
2.	Ragi	-	groundnut

Mixed Crops

Crop mixture adopted as a safeguard against a total failure of crops, is a system of agriculture in which two or more crops are grown together at a time in the same land. It is more commonly adopted in rainfed lands. The individual varieties of crops have the chance of exchanging their properties with others in the mixture in different seasons and they render the benefit of rotation. It also helps to maintain the supply of nitrogen in soil, maintain soil fertility and prevents soil erosion. It supplies more than one crop from the same soil during a period. The mixed crop pattern followed in the district is cholam, pulses, (greengram and redgram) and groundnut or cotton, groundnut and cluster beans. The talukwise cropping pattern in wetland, gardenland and dryland in the district is given in *Appendix - 4.*

Cropping Seasons

There are two main cropping seasons for paddy in Tamiraparani tract. After the two paddy crops, usually blackgram or gingelly is raised as a third crop in paddy fallows in small areas. First crop season consists of advance kar season comprising months April - May to August - September and kar season comes under May - June to September - October. Second crop consists of Pishanam and late pishanam seasons. Pishanam season covers September - October to January - February months and late Pishanam includes October - November to February - March. During the first crop season rice varieties of duration up to 115 days (ASD 16, ASD 17, ASD 18, ADT 36, ADT 37, TKM 9, IR 50 are cultivated. During the second crop season, in the Pishanam cultivation, paddy varieties ranging from 120 - 140 days viz., Ponni, White Ponni, CO 43, CO 45, IR 20, ADT 39 are grown. In the late Pishasam season, Paddy varieties up to 120 days with cold tolerance (ADT 36, ASD 16, ASD 18, IR 64 are cultivated. After the two main crops, the third crop season is known as Navarai covering the months January - February to March - April. During the Navarai season blackgram (T9, ADT3, ADT4, ADT5), gingelly (CO1) or Soyabean (CO1) are grown.

Rainfall and Paddy season

The average rainfall of the Tamiraparani valley has been about 85.30 cm. and the paddy season commences with the advent of the South-West monsoon which usually breaks out late in the month of May or in early June. When the monsoonic symptoms are signalled in the western ghats where the river Tamiraparani and its tributaries rise, the ryots start their kar nurseries well in advance with the help of water from wells or ponds nearby. The South-West monsoon on an average records about 5 to 6 inches of rain and the freshes received in the river from the month of June facilitate the kar cropping close to the heals of the South-West monsoon, the North-East monsoon sets in from the middle of October and extends up to the end of December and brings in its train heavy rains, ample enough to fill up the rainfed tanks, and facilitate the *semi* dry paddy cultivation in normal years. The North-East monsoon precipitates about 50.8 cms to 63.5 cms of rain and it is in this period that the main paddy crop is taken in the single crop wet lands of this district and it synchronizes with this pishanam or second cropping of the Tamiraparani valley. Tenkasi taluk receives a maximum rainfall of 117.1 cm. and Radhapuram taluk receives a minimum rainfall of 53.50 cm.

As stated elsewhere there are two well defined cropping seasons for paddy in this tract namely kar season (June to September) and pishanam season (September - March) besides the Manavari season (December - March) in which a manavari crop which is chiefly confined to the tracts where the supply of water is conditioned by the vagaries of the North - East monsoon. The hot weather period, January - April, records about 10.16 cm to 15.24 cm. inches of rain and the summer showers during the period are often helpful to the ryots to take a cash crop like senna or gingelly or blackgram especially in the single crop wet lands. In the upper regions of the Valley with the aid of summer rains, the wet lands are brought to a fine tilth for broadcasting kar seeds.

Kar Season: The varieties that we grown during this season are of short duration the period ranging from 110 to 120 days. Kar - Samba red which is the main variety that ruled over the whole area of the Tamiraparani valley; has been replaced by high yielding white rice varieties. But in the upper regions, broadcasting is done in the light type of soils when the lands have been brought to a fine tilth with the help of summer shower ploughings. The yield of a timely broadcast crop gives a better out turn than the transplanted crop. The kar nurseries are generally ploughed dry with the help of summer showers and kept in a fine tilth. The seeds are then, sown in dry seed beds in June at the receipt of water in the channel or earlier, if the nearby ponds get filled with water or with the soaking showers received in the latter half of May.

After the cultivation of the Pishanam crop, the fields are ploughed dry to condition the land. If this opportunity is lost for some reason or the other, the lands are wetted in March before the channels are closed and then ploughed when fit for dry ploughing. Subsequent ploughings are given to the fields as many times as possible at the receipt of summer showers in April and May. Generally in normal years, three to five ploughings with the country plough are given to the fields and brought to a fine tilth for the kar crop.

The tilth of the fields for transplantation is prepared, water is let into the fields and the planting is done straight away by women with seedlings 25 to 30 days old lifted from the dry nurseries. The number of ploughings varying from two to four depending on the condition of the fields. After ploughing using country plough, levelling is done for immediate transplantation, lest the soil would get hardened. The former method is largely practised as it saves lot of time and labour during the busy transplanting season. The ploughings given to the field are very shallow, the depth being 5.08 to 7.62 cms. and so the use of the iron ploughs is beneficial. Two ploughings with iron ploughs followed by the working of the puddling implement twice or thrice bring the soil to a fit condition for transplanting. The puddler brings the clods, making the particles into as fine a condition as possible, so that the irrigation water will not drain down too rapidly and thus it creates ideal condition to prepare the wet land for the paddy crop. By this improved method a ryot can save time and money when compared to animals used in the work. Seedlings are pulled out and transplanted. Mostly women are employed in this work.

Pishanam season

In the Pishanam, medium duration varieties and in late Pishanam short duration varieties are grown. Soon after the harvest of the kar crop normally in the last week of September, the fields are ploughed and kept in a puddled condition fairly over a month, so that a well rotton puddle for the pishanam crop is very conducive to its vigorous growth. Generally six ploughings with the country plough are given to make the kar stubbles rot well. It is the puddling implement which is immensely useful as it serves to burry the stubbles and weds quite effectively into the soil.

Crops

Paddy has by far the largest acreage compare with cotton which is an export and an industrial crop. Sugarcane is also grown chiefly for internal consumption. Midway between these crops agricultural specialities, like the chillies and vegetables occupy important positions.

Paddy is the chief crop in Tirunelveli, Ambasamudram and Tenkasi taluks. Paddy, dry grains and chillies are important in Tenkasi taluk. Cotton

is an important crop only in Tenkasi, Sankarankoil and Tirunelveli taluks. Among the regularly irrigated crops, paddy comes first. Of the total irrigated area in the district paddy occupies one fourth the proportion in the Ambasamudram taluk which possesses the best of the lands irrigated by the Tamiraparani. Other fully irrigated crops are plantains, betel-vine, and sugarcane. Though plantains and betel-vine are grown in various places in the Tamiraparani valley, the latter is grown only on tank irrigated land, because the crop requires water throughout the year. The reason that attributed is that in the channel irrigated land water is not available during the hot months from April to June. Sun- hemp, a commercial crop is another wet crop raised during the interval between *Pisanam* and *kar* crops.

Paddy cultivation in this district has been from time immemorial and it is regulated by the N.E and S.W monsoons. The period of the former being October 15th to January 15th and that of the latter is from June 15th to September 15th. All minor rivers of the district are in floods during N.E monsoon season, but Tamiraparani alone receives ample supply from June to September. However, paddy cultivation in Sankarankoil is rare, during this season.In the S.W monsoon season (called the *Kar* season) the single crop lands are not cultivated but in the N.E monsoon season (the *Pisanam* season) all lands under rainfed tanks and all lands commanded by the lower reaches of the Tamiraparani.

Varieties of paddy

Of the varieties of paddy grown in this tract, some grains are thick, some thin, some short and some long.The choice of a particular variety of paddy depends upon a number of conditions like the level of land, the nature of the soil, the time available for its growth and the prospects of irrigation. In the Tenkasi taluk under the Chittar, Kulavali, a heavy yielding crop of medium duration is preferred. It is raised on a single crop land in this tract. The cultivation of this crop begins in the last months of the *Kar* season.

Betal-vine, sugarcane, plantains

Next to paddy betel-vine, sugarcane, plantains, etc., are cultivated in the wet lands. It is a common sight in a village where there is a tank and canal irrigated lands betal-vine gardens situated in the area commanded by big tanks. Sugarcane is a rare sight in Ambasamudram taluk and that is grown in some places just at the time of "Kar paddy sowing season, to meet the demand for canes on the Pongal day. Plantains are either cultivated in canal irrigated or tank irigated lands. They are mostly, raised on lands irrigated by tanks. As far as the season and climatic conditions allow the agriculturists of these tracts produce various kinds of crops, both money as well as food crops to keep them active almost throughout the year. Dry lands are let for pasture from which the land owner receives a fair income. When the rain is favourable, the dry lands are ploughed in season and

sown with gingelly, cereals like blackgram, horsegram, etc. About 25 per cent of the dry lands will be ploughed for raising the gingelly crop in the Ambasamudram taluk. In the Tirunelveli taluk dry lands are not neglected but are ploughed for raising cotton, gingelly, and other dry grains. But in Tenkasi where 42 per cent of the area cropped is cultivated with dry crops and wet crops equally. The tract is abundant with palmyrah trees from which juice is extracted and abundance of jaggery are produced from it. During the off-season in the dry lands, tank-fed land betel-vine or plantains or chillies or all the three are raised. So in this area, the ryots do not idle away the off-season, but engage themselves in something or other which helps them improve their economic status.

Cropping pattern followed in different seasons in different regions in the district

The cropping pattern followed in Tirunelveli, Palayamkottai, Ambasamudran, Tenkasi and Shencottai taluks are as follows:

Wet lands :

(1) Paddy - Paddy - Pulses
(2) Paddy - Paddy - Gingelly
(3) Paddy - Cholam
(4) Paddy - Cotton
(5) Paddy - Chillies with onion
(6) Banana
(7) Sugarcane

Garden lands :

(1) Cotton - Paddy
(2) Chillies - Paddy
(3) Cholam - Paddy
(4) Vegetable - Paddy
(5) Cholam - Chillies with onion
(6) Ragi - Pulses
(7) Banana
(8) Sugarcane
(9) Soyabeans

Drylands :

(1) Cholam - Pulses - Gingelly
(2) Cholam - Groundnut
(3) Pulses

(4) Fodder cholam
(5) Cotton
(6) Gingelly
(7) Senna

Cropping system followed in Sankarankoil, Sivagiri, Nanguneri, Radhapuram taluks

Wet lands :

(1) Paddy - Paddy - Pulses
(2) Paddy - Pulses
(3) Cotton - Paddy
(4) Chillies - Paddy
(5) Cholam - Paddy
(6) Cumbu - Paddy
(7) Ragi - Paddy
(8) Banana
(9) Sugarcane

Garden lands :

(1) Cotton - Paddy
(2) Chillies - Paddy
(3) Millets - Paddy
(4) Pulses - Paddy
(5) Vegetable - Paddy

Dry lands :

(1) Cholam
(2) Cotton
(3) Cumbu
(4) Sunflower
(5) Cotton with pulses
(6) Pulses
(7) Gingelly
(8) Fodder cholam (in less fertile soils)

(9) Sun flower

(10) Soyabeans

The following special features are adopted in the method of cultivation of important crops

A. Paddy :

1. Cultivation of high yielding varieties
2. Using certified seeds
3. Seed treatment with fungicides
4. Application of D.A.P in the nursery to get super seedlings
5. Application of bio fertilizers - Azospyrillum, phosphobacterin and Blue green Algae.
6. Application of zinc sulphate in the mainfield
7. Maintaining plant population
8. Application of organic and inorganic fertilizers as basal
9. Using of weedicide
10. Top dressing of Urea with neem cake
11. Need based plant protection
12. Water management technologies
13. Harvesting at physiological maturity stage
14. Adopting post harvest technologies

B. Millets :

1. Cultivation of high yielding and hybrid varieties
2. Using certified seds
3. Seed treatment with fungicide
4. Using bio fertilizers - Azospyrillum
5. Maintaining plant population

C.Pulses :

1. Raising of improved and high yielding varieties
2. Using certified seeds
3. Rhizobium treatment
4. Maintaining plant population
5. Foliar spraying with D.A.P at flowering stage

D. Cotton :

1. Raising of high yielding and hybrid varieties
2. Using certified seeds
3. Acid seed treatment
4. Maintaining plant population
5. Weed management with weedicide
6. Application of micro nutrients
7. Integrated pest management practices

E. Sugarcane :

1. Cultivation of high yielding varieties
2. Seed treatment with fungicide
3. Application of Azospyrillum
4. Weed management with Weedicide
5. Integrated pest management practices

F. Oilseeds :

1. Raising of high yielding and hybrid varieties
2. Using of certified seeds and improved varieties
3. Maintaining plant population
4. Using of bio fertilizers (Azospyrillum)
5. Application of micronutrients
6. Fertilizer management
7. Water management
8. Application of Gypsum to groundnut crop
9. Integrated pest management practices

Pests and diseases and control measures

There are several pests which cause diseases that affect the agricultural crops. The Department of Agriculture comes out with remedial measures either to prevent them or to eradicate them. Pests like thrips, jassids, leaf folder, stembover, anaikomban, earhead bug are commonly found in the paddy crops. Diseases that affect paddy crops are blast, leaf spot, sheath blight, sheath rot and leaf spot. Pests that affect cholam crops are short fly, stemborer, earmidge, earhead caterpillar and earhead

bug. Leaf spot is the disease found in the cholam crops. Pests stemborer is found in the cumbu, ragi and maize crops. Gram caterpiller is found in the Pulses. Thrips, Jassids, Aphids, Bollworms and stem weevil are pests found in Cotton.

Sl. no.	*Name of the crop*	*Pests*	*Control measures*
	Diseases	*Control measures*	
1. Paddy	Thrips	Phosphomidan	100 ml/Ac. .
	Jossids	Phosphomidan	100 ml/Ac.
	Leaf folder	Phasalon	600 ml/Ac.
	Stemborer	Endosulfan	400 ml/Ac.
	Anaikomban	Endosulfan	400 ml/Ac
	Earhead bug	BHC 10%	10 kg.
2. Paddy	Blast	Edifenphos	200 ml/Ac.
	Leaf spot	Mancozeb	400 gm/Ac.
	Sheath blight	Carbnendazim	100 gm/Ac.
	Sheath rot	Carbendazim	100 gm/Ac.
3. Cholam	Short fly	Endosulfan	200 ml/Ac.
	Stemborer	Endosulfan	300 ml/Ac.
	Earmidge	Carbaryl 10 D	10 kg/Ac.
	Earhead Caterpillar	Malathion 5D	10 kg/Ac.\
	Earhead bug	Carbendazim	100 gm/Ac.
	Leaf spot(disease)	Mancozeb	400 gm/Ac.
4. Cumbu	Stemborer(Pest)	Endosulfan	300 ml/Ac.
	Ergot Rust(disease)	Carbendazim	200 gm/Ac.
	Wet Sulphur	1 Kg/Ac.	
5. Ragi	Stemborer	Endosulfan	300 ml/Ac.
6. Maize	Hairy Stemborer	Endosulfan	300 ml/Ac.
	Leaf spot (disease)	Mancozeb	400 gm/Ac.
7. Pulses	Gram caterpillar (Pest)	Monocrotophos	250 ml.
	Leaf spot	Mancozeb	400 gm/Ac.
	Mosaic	Monocrotophos	500 ml/Ac.

8.	Cotton	Thrips Jassids Aphids	Phosphomidan	120 ml/Ac.
		Ballworms	Endosulfan	800 ml/Ac.
		BHC 10%	20 kg/Ac.	
9.	Cotton	Leaf spot	Mancozeb	400 gm/Ac.
		Wilt	Carbendazim	200 gm/ac.

The department of Agriculture has commissioned one Bio-Control Lab to produce bio-control agents for crop pests and diseases. This lab helps the extension workers in bringing the farming community towards eco-friendly technology.

Horticulture

Horticultural crops grown in the district are banana, mango, guava, grapes, lime (acid), cashew, chillies, onion, coriander, tamarind, tapioca, sweet potato, elephant yam, brinjal, bhendi, tomato, arecanut, flowers etc. Other crops such as pomegranate, orange, sapota, gourds, spices are also raised in the district. Banana, an important crop in the district is widely grown all over the district but concentration is high in Nanguneri, Radhapuram, Ambasamudram, Tenkasi, Shencottai taluks. Red banana, Rasthali, Poovan, Monthan varieties. Banana is marketed in Trivandrum, Ernakulam and Cochin besides local marketing centres. Flowers jasmine, and rose grown in Sankarankoil, Radhapuram, Tenkasi and Sivagiri taluks, find market locally and in other districts. They are also sent to Trivandrum. In red loam, and black soils, of the district, horticultural crops are grown.[5]

Normal area under Horticultural Crops (in ha.)1990 March 1995 average period

Sl. no	*Name of plants and variety*	*Total (ha.)*
1.	Banana	6924
2.	Mango	2534
3.	Guava	211
4.	Grapes	85
5.	Pomegranate	12
6.	Lime (acid)	663
7.	Cashew	1029
8.	Orange	13

9.	Sapota	26
10.	Chillies	5901
11.	Onion	1525
12.	Coriander	59
13.	Tamarind	518
14.	Tapioca	211
15.	Sweet Potato	218
16.	Elephant yam	208
17.	Gourds	23
18.	Brinjal	321
19.	Bhendi	303
20.	Tomato	470
21.	Other varieties	163
22.	Arecanut	114
23.	Other spices	128
24.	Flowers	784

Cropping pattern

Sl.no. (1)	*Fruits (2)*	*Period (3)*	*Normal yield per/ha. (4)*
1.	Banana	March - April	30-40 ton.
	August - September		
2.	Mango	June - July; Oct - Nov.	10-15 ton.
3.	Lime	"	25 ton.
4.	Guava	"	25 ton.
5.	Pomegranate	"	20-25 ton.
6.	Sapota	"	15-20 ton.
7.	Amla (Nelli)	"	8-10 ton.
Vegetables :			
1.	Onion	January, June - July	12-15 ton.
2.	Tomato	"	35 ton.
3.	Brinjal	"	25-30 tons.
4.	Bhendi	January - Sep,	12-15 tons.
5.	Gourds	June - July	15-20 tons.

Spices and condiments :			
1. Chillies	January - February of Green chillies	10-12	ton/ha.
2. Clove Oct-November	June - July,	1.25 - 2.5	ton.
3. Pepper	Oct-November	1.00 - 1.2	ton/ha.
Plantation Crops :			
1. Cashew	June-July. Oct-November	1.4 - 1.6	ton/ha.
2. Arecanut	"	1.2	ton / ha.

Horticultural schemes, such as the Integrated Horticultural Development Scheme, Western Ghats Development Scheme, Cashew Development Programme, National Horticultural Board Programme, Integrated Arid Zone Fruits Development Programme, Arecanut Development Scheme and Vegetable Minikit Scheme are implemented for development of horticulture. Schemewise distribution of horticultural plants, seeds distributed to the farmers are as follows:

Sl.no (1)	*Scheme (2)*	*Years (3)*			
		92-93	93-94	94-95	95-96
1.	Integrated Horticultural Development Scheme				
	(i) Plants	200	250	300	700
	(ii) Veg.Seeds	229	250	300	450
2.	Western Ghats Development Scheme	832	688	428	457
3.	Cashew Development Programme	3	105	78	68
4.	National Horticultural Board (no.of plants)	3800	24600	17600	–
5.	Integrated Arid Zone Fruits Development Programme	49	110	54	134
6.	Arecanut Development Scheme (number of seedlings)	–	–	12000	18000
7.	Vegetable Minikit Scheme (no of kids)	155	400	100	125

Common Horticultural Diseases and pests

Sl.no. 1.	*Crop name* 2.	*Pests* 3.	*Diseases* 4.
1.	Banana	Thrips Nematodes	Sigatoka leaf spot Buchytop panama wilt
2.	Mango	Hopper Aphids	Powdery mildew Sootymould. Nutweevil Stemborer
3.	Acid lime	Leaf miner	Canker, Die back Stemborer Fruit fly.
4.	Guava	Fruit fly	Red Rust
5.	Sapota	Leaf webber	Sooty mould
6.	Tomato	Fruit borer	Leaf spot, Leaf curl
7.	Brinjal	Fruit borer White fly Aphids	Leaf spot, Damping off
8.	Bhendi	Fruit borer	Yellow mosaic Virus
9.	Chillies	Aphids, Thrips fruit borer	Leaf spot, Anit rot
10.	Pepper	Thrips, Polhi Beetle	Quick Wiet
11.	Clove	Stem borer	--
12.	Cashew	Stem borer Tea mosquito bug	Die back

Plantation crops

Cashew, Arecanut, betelvine are cultivated in the district. Cashew is cultivated between July to October, arecanut between July to October and betelvine between November and December. Varieties of plantation crops, spacing, fertilizers, and yield per hectare are as under:

Crop		Varieties	Spacing	Fertilizer dose			Yield/ha.
				N	P	K	
(1)		(2)	(3)	(4)	(5)	(6)	(7)
1.	Cashew	VRI 1,2,3	7 x 7 metre	500	125 tree	125 gm/	1.20 to 1.60 ton
2.	Arecanut	Mangala metre	2.75X2.75	100	40	150 gm/tree	1.25 ton.
3.	Betelvine	Karpuri	100,000 sets/ha.	150	100	18 kg/ha.	75-100 lakh leaves/ha/ year.

There is a State Horticultural Farm at Five Falls Courtallam which was started in the year 1959 in an area extending over 15.07 ha. Mango, clove, nutmug, mangostein, arecanut, and ornamentals are grown in the district.

High Yielding Varieties in different crops

Paddy : High yielding varieties introduced in the Paddy crop are TKM 9ADT 36, ADT 37, ADT 38, ADT 39, IR 50, ASD 16, ASD 17, ASD 18, IR 20, CO 43 and IET 1444.

Cholam: CSH 1, CSH 5, K Tall, CO 26, K4 and K9 are high yielding varieties in the Cholam crop. K9 HYV is cultivated in the Tenkasi tract.

Cumbu : KM 2, KMS 7703, WCC 75 ARE HYVS under Cumbu crop.

Ragi : HYVs under ragi crop are CO 11, CO 13, PR 202.

Maize : CO 1.

Redgram : SA 1.

Blackgram : TMV 1, CO 5, ADT 3, Vamban 1.

Greengram : KM 2, ADT 2, CO 4.

Cowpea : P 152, CO 4, Payur 1.

Cotton : MCU 5, MCU 10, LRA 5166.

Sugarcane : CO 671, CO 90063, COC 92061, COC 85061, CO 6304.

Groundnut : TMV 2, TMV 7, VRI 1, VRI 2, JL 24.

Gingelly : TMV 3, SVPR 1.

Sunflower : K1, K 2, Morden

Soyabeans : CO 1.

Tea, Coffee and Cardamom Estates

The climate conditions, altitude and rainfall in the eastern slope of the western ghats are conducive for the growth of tea, coffee and cardamom estates in the district. These estates are in the Oothu, Manimuthar and Manjolai areas.The Bombay Burmah Trading Corporation Ltd., with headquarters at Bombay maintains tea, coffee, cardamom estates to the extent of 804 ha; 143 ha; and 214 ha respectively. The Corporation brought 8373.57 acres from the Zamindar of Singampatti on 12th February 1929 on lease agreement. The price agreed for occupation was Rs.35/- per acre and the lease envisages payment of annual rent as well.[6] Since then, the Company had planted tea, coffee and cardamom in the area along with wattle and other shade trees which are integral part of plantation crops,. The planting activities were completed by 1952 and afterwards only regeneration, infilling etc., are carried out. Organic tea cultivation, on an experimental basis is practised in Oothu estate whereas regular practices are adopted in other estates. The Manimuthar and Manjolai are adopting the pest and weed control measures introduced by the Tea Research Institute and United Planters Association of South India.

Agricultural Schemes

Agricultural schemes have been implemented in the district to help and increase the production of various cereals. The Integrated Programme for paddy development commenced from the year 1990-91 helps increasing paddy production. The productivity of paddy increased from 3.572 MT/ha. to 6.00 MT/ha. Special Foodgrains Production Programme is implemented for increasing the production of millets. The production of millets incresed to 3010 MT/ha. from 2000 MT/ha. National Pulses Development Programme is implemented to increase the pulses production. The productivity of pulses was increased to 670 Kg/ha. Intensive Cotton Development Programme implemented from the year 1971, has caused increase in cotton production. The productivity under cotton is 2.64 bales / ha.

Sugarcane Development Scheme is implemented to increase the production of gur, and the production during 1993-94 was 42770 MT. Fodder Development Scheme has been implemented from 1991-92 to increase the fodder production. Oil Seeds Development Programme has been implemented from the year 1985 to increase the production of oilseeds. Total oilseeds production during 1993-94 was 22,710 M.T.Crash Programme for Tall Nuts Production was implemented in 1985 for the purpose of increasing the production of Tall seedlings production. During 1993-94, 1,05,220 Tall nuts had been prowed from the related mother palms. Tall & Dwarf Coconut Seednuts Production Scheme has been implemented from the year 1992 helps in improving the production of T & D seednuts. 30000 T & D seednuts were produced during 1993-94.

Seed Multiplication Scheme is implemented for the production and distribution of quality paddy and millets seeds and Cotton Development Scheme is implemented for production and distribution of quality cotton seeds. Micro Nutrient Scheme is implemented to overcome the micro nutrient deficiency. Biofertilizer scheme is implemented to substitute the chemical fertilizer. Atmospheric nitrogen is fixed up in the soil. Plant Protection Scheme is implemented to protect the crops from pests and diseases. Special Componant Plan for Adi Dravidars has been implemented from 1980-81 to inculcate Adi-Dravida farmers to use inputs for agricultural production.

Special scheme to small and marginal farmers has been implemented from 1992-93 to help them to purchase the improved agricultural implements for farming. Improved agricultural implements to the tune of Rs.15 lakhs were distributed to these farmers. 21 mini tractors, 20 power tiller trailors, 85 tyre carts and 850 tarpaulins were distributed at 50 per cent subsidised cost. Adaptive Research Trial Programme implemented from the 1970-71 helps in finding out the suitability of the new strains and technologies for this tract. Crop Estimation Survey helps assessing the yield of different crops by stratified random method. Crop Insurance Scheme under the scheme risk in farming and compensating the loss by assessing the yield at random is covered.

TANWA Scheme, implemented from the year 1988-89 is to train the farm women with technologies.Integrated Watershed Development Programme is implemented in the year 1991-92 in improving the dry land agriculture and horticulture. National Watershed Development Project for rainfed areas (NWDPRA) Scheme is implemented from 1990-91 by integrating all activities to improve the dryland agriculture and the socio-economic status of the dry land farmers.

Soil Sample Scheme : Monitoring and Evaluation Scheme has been implemented since 1982-83 to find out the fertility status of the soil and to assess the adoption of technologies by the farming community.To improve the socio economic status of the small farmers credit facilities for the improved agricultural programme, cattle rearing, dairy development, poultry development, purchase of cart draught animals etc., were extended through Small Farmers Development Agency from 1970-71 to 1979-80 till the establishment of District Rural Development Agency which took these responsibilities afterwards.

Seed Certification

Through Intensive Research different high yielding varieties of seeds have been brought out to achieve higher production. These varieties help reaping good returns; when these new varieties are not multiplied rapidly the purpose of new findings becomes obsolete. When the seeds are multiplied, they should be pure, germinable with a low moisture content. To this effect, a certificate is issued by the Seed Certification Department which testifies and satisfies with the quality of the seeds before issuing certificate as to the quality of the seeds. The Seed Certification Department is mainly looking after the quality of seeds. Seed certification is purely voluntary. Farmers who are desirous of getting their seeds certified, could approach the seed certification department which has formulated procedures to achieve the seed standards. These seed standards have been prescribed by the Government of India and contemplated as Indian minimum standards. The seed producers may be Government, *Quasi* Government, or private people. The seed producers have to use proper source of seed for different classes of seed multiplication.They have to register their farms with the Assistant Director of Seed Certification of the district concerned.

The Seed Certification Department, headed by an Assistant Director at the District level, is assisted by one Seed Certification Officer (Tech.) and six seed certification officers in the district. The genetical identity and purity are examined at the time of registration. The Seed Certification officer, who works under the Assistant Director of Seed Certification, inspects the seed farm at various stages of the crops. The seeds are dried thoroughly, processed at approved seed processing units and graded. The graded seeds are sampled and tested in Government seed testing laboratories. When the seeds meet the prescribed standards like purity, germination, moisture etc., they are being certified as Foundation stage I and II with white tag and as certified classes with a shade of blue. Apart from this, the Department enforces the Seed Act 1966 and if any violation or malpractice is found in the marketing of seeds, the seller is prosecuted in the Court of Law. Testing of seeds is required to find out their quality. To evaluate the seed, a separate Seed Testing Laboratory, under the control of a Seed Testing officer assisted by two Agricultural Officers, has been started at Tirunelveli. For seed testing the procedures, contemplated by the International Seed Testers Association, are being followed.The farmers and seed producers, can benefit by the training programme thrown to them by the Seed Certification Department, and gain knowledge on the latest

seed production techniques. The Seed traders, on the other hand, are trained on the implementation of the Seed Act, 1966.

Details of area registered, area certiified, quantity processed and quantity tagged from 1981-82 to 1997-98 are tabled below [7]

Sl. no.	*Year*	*Area registered*	*Area certified*	*Quantity processed*	*Quantity tagged*
1	*2*	*3*	*4*	*5*	*6*
1.	1981-82	1433.94	1311.54	1395.693	1128.666
2.	1982-83	1659.72	1553.72	1705.915	1707.429
3.	1983-84	1428.50	1244.20	1086.232	1134.914
4.	1984-85	2048.03	1800.03	1707.356	1504.037
5.	1985-86	1803.46	1655.46	1342.920	1125.441
6.	1986-87	1083.47	961.95	1369.246	1134.357
7.	1987-88	1547.20	1482.80	1226.937	923.471
8.	1988-89	2344.00	2053.96	1784.661	1570.547
9.	1989-90	3201.00	2589.60	2558.226	1819.673
10.	1990-91	3479.20	2798.00	2197.137	1712.112
11.	1991-92	3634.00	2936.66	2925.994	1788.185
12.	1992-93	2522.00	2169.24	2574.892	1731.896
13.	1993-94	2539.00	2326.30	2313.186	1989.392
14.	1994-95	2530.00	2340.60	2488.274	1682.921
15.	1995-96	2493.00	2289.90	1796.852	1695.441
16.	1996-97	2493.00	2289.90	1796.852	1695.441
17.	1997-87	2505.80	2370.60	1975.107	1724.916

Government Orchard - *cum* - Nursery

A Government model orchard attached with a nursery is situated at Courtallam. This is to supply quality pedigree plants to ryots for obtaining enhance yield. The orchard was started in 1959 in an area of 15 ha. acres. Mangoes, acid lime, guava, cloves, nutmeg and pepper are grown in this nursery. Quality cloves and nutmeg seedlings are distributed to the hill ranges of western ghat areas. A high yielding pepper variety is multiplied and distributed.

State Seed Farms

State Seed Farm, Karaiyiruppu

The State Seed Farm formed on 1 October 1957 at Karaiyiruppu in Tirunelveli taluk is engaged in the production of high yielding paddy seeds (certified and foundation seeds), pulses, bhendai and green manure seeds. It has a total area of 83.59 acres with a cultivable area of 80.00 acres. Though, paddy is cultivated in Kar and Pishanam seasons, Green manure is raised only during Kar season. The paddy varieties raised during Kar seasons are IR 50, ASD 16, ASD 18, and ASD 16, ASD 18 ; ASD 19, ADT 36, ADT 39, IR 64, and CO - *43 are raised in Pishanam season.*

Dwarf x Tall Coconut Farm, Ettankulam

Dwarf x Tall (D X T) Coconut farm commenced functioning since 26 September 1983 at Ettankulam in Manur block about 30 km. from Tirunelveli, in an area of 301.55 acres. It raises mother palms, Tall varieties, Dwarf varieties, it produces hybrid seednut through crossing and raises TXD seedlings. Mother palm initially is cultivated in 103.26 acres is now being extended to 198.29 acres. The Dwarf varieties that grown are Malayam orange Dwarf, Malayam Yellow Dwarf, Chawghak orange Dwarf etc.

Production of nuts, production & distribution of coconut seedlings from 1992-93 to 1995-96

Sl.no. (1)	*Year* (2)	*Production of hybrid nuts* (3)	*Distribution of hybrid seedlings* (4)
1.	1992-93	295 nos.	80 nos.
2.	1993-94	3484 nos	1629 nos
3.	1994-95	11671 nos	3120 nos
4.	1995-96	34087 nos	9115 nos

Production and distribution of seedlings (Dwarf)

Sl.no. (1)	*Year* (2)	*Production of nuts* (3)	*Quantity of nuts transferred* (4)	*Distribution of Dwarf seedlings* (5)
1.	1991-92	4492 nos.	1160 nos.	290 nos.
2.	1992-93	5244 nos.	1121 nos.	2220 nos.
3.	1993-94	3853 nos.	2050 nos.	563 nos.
4.	1994-95	11439 nos.	10667 nos.	2415 nos.
5.	1995-96	12970 nos.	6906 nos.	1267 nos.

Coconut Crossing Centre, Vadakarai

Coconut Crossing Centre is located in Vadakarai village in Tenkasi taluk about 15 km. from Tenkasi town towards North East. It started functioning from 1 December 1991 in an area of 3.94 acres. Procurement of nuts and distribution of seedlings from 1992-93 to 1995-96 are tabled below:

Sl.no.	*Year*	*Procurement*			*Distribution*		
		Tall	*TXD*	*Dwarf*	*Tall*	*TXD*	*Dwarf*
(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*
1,	1992-93	64025	35000	–	24580	42479	–
2.	1993-94	20595	30000	–	41624	22086	–
3.	1994-95	10482	57707	–	19320	27498	–
4.	1995-96	–	50589	3071	5821	23420	1630

Between 1992-93 and 1995-96, about 650 trees were crossed each year and nut numbering 35000 in 1992-93, 30000 in 1993-94, 57707 in 1994-95 and 50589 in 1995-96 were procured.

State Oilseed Farm, Vadakarai

The State Oilseed Farm has been functioning from 5, April 1971 at Vadakarai village about 16 km. from Tenkasi in an area of 76.53 acres of which 71.42 acres are cultivable. 30 acres of these areas are irrigated through four open wells and one bore well and 41.42 acres are rainfed. The main function of the farm is to produce and distribute Coconut seedlings to the farmers.

State Coconut Nursery, Shencottai

A State Coconut Nursery was started in Shencottai on 5 August 1958 to engage in the production of Tall Coconut seedlings. The total area of the Nursery is 1.95 acres of which cultivable area occupies 1.15 acres. There are 168 Nursery beds. Production of nuts and production and distribution of seedlings of Tall, Tall XDwarf and Dwarf from 1991-92 to 1995-96.

Tall variety

Sl.no.	*Year*	*Procurement of nuts*	*Production of seedlings*	*Distribution of seedlings*
(1)	*(2)*	*(3)*	*(4)*	*(5)*
1.	1991-92	21846	16385	36787
2.	1992-93	61750	46313	25046
3.	1993-94	21700	16275	46899
4.	1994-95	50000	38000	32356
5.	1995-96	52236	39700	14312

Dwarf x Tall ***Variety***

Sl.no. (1)	*Year of nuts* (2)	*Procurement seedlings* (3)	*Production of seedlings* (4)	*Distribution of seedlings* (5)
1.	1991-92	11300	7910	14857
2.	1992-93	15500	10850	12706
3.	1993-94	Nil	Nil	Nil
4.	1994-95	5305	3767	1012
5.	1995-96	5363	3808	2682

Parasite Breeding Station, Melagaram

Parasite breeding station is at Ayirapperi, Melagaram village, which is 4 km. from Tenkasi. The Station has been functioning from 15 July 1973 which is engaged in releasing parasites i.e. Bethylids, Brochonid and Eulophids in 1:1:2 ratio for the control of Black headed caterpillar in Coconut. The station is engaged in the production of parasites from 1991-92 to 1995-96.

Sl.no. (1)	*Year* (2)	*Bethlid* (3)	*Brochonid* (4) (Rs. in Lakhs)	*Eulophid* (5)
1.	1991-92	25.8	25.8	51.6
2.	1992-93	60.0	60.0	120.0
3.	1993-94	60.0	60.0	120.0
4.	1994-95	60.0	60.0	120.0
5.	1995-96	60.0	60.0	120.0

Rice Research Station, Ambasamudram

The Rice Research Station, at Ambasamudram was opened in 1937 with the object of providing facilities for the improvement of the local varieties of paddy by pure line selection and hybridisation, to try the possibilities of introducing new varieties of paddy from other places and also for conducting manurial and cultural experiments. The station was started with 9.49 acres of double crop wet lands and 2.18 acres of dry land piece close-by.[8] The average annual rainfall here is 925.2 mm and the soil texture is sandy loam and soil ph. is 4.8 to 6.4 (acidic). It is irrigated through a bore well and one open well as also from the Nathiunni Channel off the Tamiraparani river. The Research Project of this station is based on farmers' requirements. It evolves high yielding varieties of rice that would suit different agro climatic contexts with quality to resist major

insects and diseases, providing techniques on seed and main field treatments for improved rice varieties, and suitable manurial recommendations for rice varieties under cultivation and for pre-release cultures culturing native soil fertility with biofertilizer, forecasting insects or diseases in relation to weather conditions and providing suitable plant protection measures are the main other functions of the Station. Studies on Cropping pattern, fertilizer management, soil status, application of Potash, infestion of paddy pests in new varieties, and in different seasons and remedial measures for them, and integrated pest management etc., are made in the research station.The Research Station has released 18 improved strains in rice, of which the strains ASD 16 and ASD 18 released in 1994-95 are sought after by the farmers throughout Tamil Nadu because of their high yield potential, short duration and suitability to all the three seasons. The strains released from the rice experiment station is given in *Appendix - 5.*

Field based training

The fruit of scientific advancements on farming made in the research stations becomes a potential instrument of change only when it finds field application. To achieve this objective, The Farmers' Training Centre at Tirunelveli organises training programmes, exhibitions, demonstrations etc., for the farmers. The Agricultural School at Karaiyiruppu imparts training to young farmers in modern techniques of production. Input supply mechanism and the actual process of implementation are the various ideas of field programmes. Being one of the important inputs in agriculture, quality seeds are produced in the State Seed Farms and distributed to the farmers, through agricultural depots. The Coconut nurseries at Shencottai and Vadakarai serves this purpose in the area of Coconut seedlings. Private traders have also entered into this fray of high breed seeds. Fertilizers and plant protection chemicals are mainly distributed through private traders and cooperatives.

Progress of Scientific Agriculture

Production by adopting the latest technology in agricultural operations is important to increase the yield. Production is the parameter which would determine the progress made through scientific agriculture. As shown in the table production over a period of 45 years between 1950-51 and 1995-96 has been considerably increasing.

Production trend of Major Crops

(Ton / Ha.)

Year	*Rice*	*Cholam*	*Cumbu*	*Pulses*	*Cotton (Lint)*
1950-59	0.600	0.800	0.420	0.220	315
1990-96	4.344	2.68	2.275	0.437	0.476

It has been indicated that the yield trend of rice had increased from 0.600 Ton/Ha.(in fifties) to 4.344 Ton/Ha. (in nineties) six times. The other crops too show a similar trend. The State Agricultural Department started its production oriented approach through community development programme in the fifties. In the mid sixties, the exploitation of Genetical potential of major crops enhanced the production. The introduction of I.R derivatives in rice from thiliphines and hybrids in millets have caused increase the production of food crops and cotton. This can mainly be attributed to the receptive attitude of the training community which throw open its doors for the innovative technologies. The green revolution paved the way for self sufficiency in food production. The well organised extension system achieved the coverage of High Yielding varieties in this district. Launching of High Yielding Variety Programme (H.Y.V.P) and Intensive Agriculture Area Programme (I.A.A.P) in this district has contributed a lot to attain the sustainable production in major food crops in this district.

The growth of population thrusts agriculture to produce more by reorganising the system instead of area approach. Individual approach was emphasised to influence the productivity and production. The World Bank assisted 'Training and Visit' system was introduced on 1st July 1982.The transfer of technology is passed on to farmers by contact farmer approach by contacting farmers once in a fortnight. The Village Extension Worker who is incharge of eight hundred farm families, visits the villages by adhering a fixed schedule of visit. The district level zonal workshop and monthly trainings at taluk level facilitate the extension worker to learn the latest technical know-how in agriculture, which is conveyed to the farmers regularly. The close supervision, regular village visit and periodical contact with research have given a new dimension to agriculture in this district. Technologies such as bio-fertilisers, split application of fertilisers, maintenance of plant population, Micro nutrient application, Water management, Integrated Pest Management etc., adopted by most of the farmers, cause spectacular increase in yield of food production In nineties when the Department of Agriculture felt the need to change its strategies, it introduced the Broad Based Extension under Tamil Nadu Agricultural Development Project. The concentration of extension system on crop orientation was widened with allied activities like Agricultural Engineering, Horticulture, Animal Husbandry, Forestry and Sericulture, to help the farmers get in sustainable income.

The Agriculture Department is distributing seeds through its 53 Agriculture Extension Centres spread through out the district. The seed replacement rate in percentage for distribution adopted is paddy 17, ragi

eight, cholam six, cumbu eight, maize six, redgram 6.1, blackgram 17.7, greengram 11.7, bengalgram 5.1, horsegram 1.0, cowpea 14.2, groundnut 5.0, gingelly 15.9, sunflower 50, castor 30 soyabeans 20, cotton (rainfed) 10 and cotton (Irrigated) 15.00.

The seed production programme in Tirunelveli District is taken up by adopting two tier system viz., foundation seed production, certified seed production. The breeder seed produced by Tamil Nadu Agricultural University is utilised for foundation seed production at State Seed Farm, Karaiyiruppu and in registered seed farms of the farmers. In the same pattern certified seed is produced. As the certified seed demand is increasing day by day, many private firms have entered into this trade. As the new strains derived are of higher fertiliser responsive and this necessitates application of inorganic fertilizer.The consumption of major fertilizers (in lakhs MT) in this district is as follows.N = 0.27, P = 0.08, K = 0.08, Total 0.43.

To enforce strict quality control nine fertilizer inspectors are placed at taluk level and one Assistant Director of Agriculture at district level. There are 842 retail fertiliser dealers in the district. To impart the knowledge on Integrated Pest Management with eco-friendly strategies on the Food and Agriculture Organisation (F.A.O) pattern, Farmers Field Schools are organised, to which the response from participating farmers is appreciable. For rice crop 30 schools and for cotton 60 farmers field schools are run by the department. For agriculture development, watershed approaches are implemented in the Nanguneri, Melaneelidanallur and Sankarankoil blocks. The Integrated Watershed Development funded by the World Bank is implemented in the Nanguneri block with a project outlay of Rs,25 lakhs. Another scheme known as the National Watershed Development Project for rainfed areas (NWDPRA) is implemented in the Melaneelidanallur and Sankarankoil blocks with a project outlay of Rs.49 lakhs per block. Dry land ranging from 350 - 600 ha. is brought for agriculture under the Watershed development Works.

To equip the women farmers, who form a considerable part of agricultural working force, with modern trends in agriculture a special programme called Tamil Nadu Women in Agriculture (TANWA) was launched in the district during 1986-87. The uniqueness of this programme is that farm women are trained by Women officer in agriculture. After the phase-I (1986-93) programme the district is in Phase II which runs up to 2000 A.D. To increase production of oilseed crops like groundnut, gingelly, sunflower, soyabeans and castor, the Central and State Governments sponsored programmes which are implemented in the district.

ANIMAL HUSBANDRY

Animal Husbandry activities are looked after by three divisions which are located at Tirunelveli, Ambasamudram and Tenkasi. The divisions at Ambasamudram and Tenkasi were established in the year 1970 while the Tirunelveli division was formed in 1989. Each division is under the control of an Asst. Director of Animal Husbandry. The Cattle Development Scheme and Fodder development activities are looked after by the Deputy Director of Animal Husbandry, Tirunelveli. Seven veterinary hospitals, 36 veterinary dispensaries and 76 sub-centres, one district squard and one vigilance unit serve the district. All the centres have frozen semen facilities. All the activities carried out in the key village centres and Intensive Cattle Development Project Centres have been taken over by the Cattle breed and Fodder Development unit centres and brought under the control of the territorial Assistant Directors of Animal Husbandry at Tirunelveli, Ambasamudram and Tenkasi from 21 June 1991. A district livestock farm at Abishekapatti was started in 1964, with the aim of increasing milk production, supplying frozen semen straws, and production of green fodder. Fodder Development Scheme aims at increasing the green fodder production, and offers training for maintenance of Fodder crops, fodder seeds, hybrid cumbu, grass cuttings to all livestock growersof fooder crops and fodder seeds are supplied free of cost.[9]

Statement showing Milk Production

Milk Production (1000 tonnes) per day from 1980-81 to 1997-98 :

(Yearwise)

Year		*Kgs.*
1980-81	–	104354
1981-82	–	117019
1982-83	–	117019
1983-84	–	130717
1984-85	–	153625
1985-86	–	149570
1986-87	–	242212
1987-88	–	258330
1988-89	–	262832
1989-90	–	262832
1990-91	–	337630
1991-92	–	337630
1992-93	–	340251
1993-94	–	363331

1994-95	–	364415
1995-96	–	389601
1996-97	–	402638
1997-98	–	406916

Per capita availability

Milk per day (gms) from 1980-81 to 1997-98 :

1980-81	–	47
1981-82	–	53
1982-83	–	53
1983-84	–	59
1984-85	–	69
1985-86	–	67
1986-87	–	108
1987-88	–	116
1988-89	–	118
1989-90	–	125
1990-91	–	124
1991-92	–	152
1992-93	–	153
1993-94	–	155
1994-95	–	158
1995-96	–	165
1996-97	–	168
1997-98	–	171

The Tirunelveli District Cooperative Milk Producers' Union Ltd.

An Integrated Dairy Development Project, at the cost of Rs.7.05 crores assisted by the National Co-operative Dairy Development Corporation (NCDC) and the Government of Tamil Nadu, was commenced in the year 1987.This was to organise 184 new milk producers co-operative societies and to cover 651 societies under milk procurement, bringing 80,900 farmers under co-operative ambit covering 1,05,200 milch animals. The project had to enhance the milk procurement to 73600 litres and milk marketing to 60000 litres per day(LPD). It covers 520 societies under Artificial Insemination and Animal Husbandry out of an allotment of Rs.306.50 lakhs. Under the project, Rs.226.66 lakhs was spent up to October 1993. Under animal health cover, out of the allotted sum of Rs.56.31 lakhs, Rs.37.03 was spent up to October 1993; under artificial

insemination cover a total amount of Rs.99 lakhs were allotted of which Rs.44.30 lakhs, were spent upto October1993. For fodder development and support to village cooperatives out of the allotted sum of Rs.31.52 lakhs and Rs.211.01 lakhs, a sum of Rs.19.67 lakhs and Rs.39.49 lakhs (up to October 1993) were spent respectively.

There are 12 mobile veterinary routes and 21 milk collection routes in the entire district. About 379 milk procurement societies under animal health area have been trained in artificial insemination work. In the Co-operative ambit 81.6 thousand members and 98.8 thousands milch animals have been involved. The two chilling centres are located at Sankarankoil and Valliyoor. While the former was established in the year 1992 with a capacity of 30,000 and the later chilling centre was established in 1988 with the capacity of and 20,000 litres. A pasteurisation plant and a dairy farm have been established in the year 1986 with a capacity of 50,000 litres each.[10] The milk chilling capacity of the Tirunelveli dairy has been increased to one lakh litres from 50,000 litres per day and the capacity of the Sankarankoil milk chilling centre has been increased to 50,000 litres from 30,000 litres per day.[11]

Fisheries

Both inland and marine fisheries are available in the Tirunelveli district. Marine fishing is carried on in the Radhapuram taluk which has coastal areas. Inland fishing is done in the rivers and reservoirs. Manimutharu and Gadana rivers have inland fishing activities. All fish seeds are produced in the fish seed farm. For the development of fish production, quality fish seeds are produced by induced breeding methods. Fish culture is practised in rural fishery demonstration tank; the Fishermen Cooperatives have effectively been supervised and financial assistance granted to them under National Cooperative Development Corporation and the Fishermen Accident Group Insurance Scheme has been implemented.

Fresh water area that is available for the development of fisheries in the district is only 1240 ha.(cultivated). Fish seeds are produced in the Manimuthar fish seed farm maintained by the Fisheries Department; Gadana fish seed farm is maintained by the Fisheries Department. Fish Farmers Development Agency and National fish seed farm. Area available for fish seed production in Manimuthar fish seed farm is 9140 M^2, Gadana fish farm 9066 M^2 in Fish Farmers Development Agency 2804 M^2 and National Fish Seed Farm 40866 M^2. In the year 1989 the Government sanctioned Rs.124 lakhs for construction of National fish seed farm in Manimuthar reservoir in an area of 10 hectares and the work was entrusted to Fishing Harbour Circle, Chennai.

The Manimuthar National Fish Seed Farm has breeder pond (size 90 X 75 X 1.5 m) ; eight rearing ponds (size 66 X 22 X 1.5 m) and 75 nursery

ponds (size 30 X 10 X 1.2 m). The National Fish seed farm was brought under the control of the State Fisheries Department from 9 July 1993. The breeder ponds can stock about 1350 kgs of breeders and can rear 540 lakhs Major carps early Fry per annum. Manimuthar, Gadana, Ramanathi, Gundar and Karuppanathi reservoirs are under the control of the Assistant Director of Fisheries (Regional) at Manimuthar for development of fisheries. The area for fish rearing in the Manimuthar, Gadana, Ramanathi, Gundar and Karuppannathi are 450 ha; 70 ha; 38.4 ha; 14.3 ha; and 50 ha. respectively. The commercial fishing in these reservoirs are conducted by utilising the services of Fisheries Department fishermen as well as by private fishermen on share basis. eighty seven irrigation tanks were identified for intensive fish culture which are undertaken by the Fish Farmers Development Agency. During 1992-93, a quantity of 236.402 tonnes were caught. The Fish Seed production in the Manimuthar reservoir was 301 lakh hatchings and 18.83 lakh fingerlings during 1992-93. In the Gadana reservoir, about 72 lakh hatchlings , 7.54 lakhs fingerlings were produced and the Fish Farmers Development Agency produced 81 lakhs hatchlings in1992-93. [12]

Fish Farmers Development Agency

The Fish Farmers Development Agency established in Tirunelveli in 1980 is primarily to promote scientific integrated fish culture; linking modern techniques of fish culture with training, production, marketing, credit etc. Its other objectives are (i) to create a category of fish farmers from the existing pond owners, (ii) to create viable employment in the rural sector and to increase rural income, (iii) to reclaim and renovate ponds in the villages for fish production, (iv) to provide job for rural youth, (v) to envisage arrangements for post harvest activities like fishing, marketing etc., and (vii) to adopt latest technique in fish seed production, polyculture and integrated fish production.

The Fish Farmers Development Agency had allotted tanks to 380 beneficiaries and 409 persons were trained. In 1992-93, 531, ha. of water were stocked, 200.7 ha. were harvested and about 236.4 tons of fish were produced. The rate of production was 1178 kg/ha. The Fish Farmers Development Agency has a fish seed farm at Manimuthar with a total area of 3124 sq. mts. During 1992-93, 10.59 lakhs of fish seeds were produced here. According to 1986 Census, there were 18608 marine fishermen and 4660 inland fishermen population in the district.

Fish Varieties

The varieties of fishes that are available in the district are, Sharks, Skates and Rays, Chirecentrus, Lieaser Sardines, Hilsa Ilisha, Anchoveilla, Other clupeids, Hemirhamphus and Belone, Perches, Red Mullets, Scisenids, Ribbon fish, Caranx, Chorinemus, Leiagnathus, Lactarius, Pomfrets

Mackerel, Seer, Mugil, Soles, Pensaid Prawns, Lobsters, Crabs, Lethrinue, and other miscellaneous items.The fishermen are provided with free housing under Fishermen Free Housing Scheme. Under this Scheme, 167 houses have been constructed and allotted. One fish marketing society is functioning in the district. Ten fishermen coopertive soicieties with a total membership of 1494 have been set up. The National Cooperative Development Corporation provides share capital assistance, loan and subsidy for the development of fisheries in the district.

Salient features of fish stocked in Inland water available :

1. Catla - It is a surface feeder and feeds on Zooplankton. It can grow from one to two kgs in a year. The seed is locally available.
2. Rohu - It is a column feeder and feeds on Plankton, and can grow from one to two kgs.in a year.The seed is locally available.
3. Mrigal - It is a bottom feeder and feeds on both phyto and Zoo-plankton available in the bottom of a pond. It can grow up to one kg. in a year. The seed is locally available.
4. Common Carp - It is a bottom feeder and feeds on all decayed matter at the bottom of a pond. It can grow from one to two kgs. in a year.
5. Grass Carp - It is an exotic Carp introduced in India long back. The seed is available in Andhra Pradesh and to some extent inTamil Nadu. It feeds on all the vegitation available in ponds. It can grow from one to two kg. in a year.
6. Silver Carp - It is also an exotic Carp introduced in India. The seed is available in Andhra Pradesh and to some extent in Tamil Nadu. It feeds on phyto plankton and a surface feeder. It can grow from one to two kg. in a year.

The above size carp can be cultured as "Composite Fish Culture" so as to utilise the entire feed available in a pond and to grow maximum size in a shorter period.

Fish Seed Production

An important input in the Indian Fisheries Development is the fish seed. Tamil Nadu had to fully depend on the natural seed collection for the stocking in reservoirs and other water bodies during 1950s. The introduction of induced breeding technique helped the Fisheries Department

to start induced breeding centres in all important reservoirs so that the State's requirement could be met. The district has two induced Carp spawning centres one at Manimuthar and the other at Gadana. The former was started on 28 February 1959, with a total seed rearing area of 3700 sq. m, the brood stock area of 5850 sq. m. and the total water spread area of 9550 sq. mts. The latter centre was commenced on 30 May 1985. It has a total rearing area of 4570 sq. m. the brood stock area is 4500 sq. m. and the total water spread area is 9070 sq. m. National Fish Seed Farm has been functioning at Manimuthar from 9 July 1993. The total area of the farm is 3.20 ha. in 1993-94. Fish seeds produced in the Manimuthar and Gadana farms from 1990-91 to 1993-94 are below :

Sl.no. 1	*Year* 2	*Manimuthar* 3	*Gadana* 4
		(in lakhs)	
1.	1990-91	303.25	54.20
2.	1991-92	301.25	71.00
3.	1992-93	301.77	72.00
4.	1993-94	303.60	71.25
5.	1994-95	303.35	70.25
6.	1995-96	230.65	44.25
7.	1996-97	110.00	56.00

Reservoir Fisheries

The State Fisheries Department is managing Manimuthar, Gadana,Ramanadhi, Karuppanadhi and Gundar reservoirs by stocking fingerlings and the quantity of fish landed in the reservoirs between 1991-92 and 1993-94 are furnished in the table below:

Sl.no.	*Reservoir*	*Water spread area*	*Quantity of fish caught* (in Kgs) *1991-92*	*1992-93*	*1993-94*
1	2	3	4	5	6
1.	Manimuthar	870	1750	4431	10066
2.	Gadana	80	2530	765	63
3.	Ramanadhi	100	580	41	260
4.	Karuppanadhi	50	3080	1844	2805
5.	Gundar	14	3000	668	2003

Details on stockings, fish landed and Revenue earned from Manimuthar, Gadana, Ramanathi, Karuppanadhi and Gundar are given in *Appendix - 6.*

In the year 1982, the Tirunelveli District Fish Farmers Cooperative Marketing Society Ltd., was formed at Tirunelveli which had 79 membes in 1995.

Forests

Dense forests in the district are found in parts of Shencottai and Tenkasi taluks. Scrub jungles are however found scattered. Nearly 25 per cent of the geographical area of the district is under forest, comprising about 600 species of timber trees and 3500 species of plants. The dense forests of Shencottai and Tenkasi taluks are covered by medicinal shrubs, teakwood, etc. The chief forest produces of the district include teak wood, rose wood, wild jack and cave wood.Firewood and sandal wood are other major products. Minor products include cashewnut, cashew fruit, tea, Karuvelampattai, tamarind, honey, kaddukai, cane, thaneerkodi etc.

Social Forestry scheme

Social forestry scheme aided by the Swedish International Development Agency (SIDA), was formulated in 1981 with the objectives of raising plantations outside the reserve forest areas in tank foreshore, hillocks poramboke, road side vacant land, river canal and railway line with people participation; and in community lands to augment the supply of fuel, fodder and small timber; The scheme is implemented outside reserve forests mainly community land with objective to reduce pressure on reserve forests with increasing populatioin, which ultimately protect the natural eco/system.[13]

The reserve forest area in the district is 1241 sq.km. Tamarind, Nelikkai are important forest products. Social forestry division in Tirunelveli was established in the year 1981. The source of revenue to the social forestry is realised through tendering the wood trees in the social forest trees grown in tank beds. There is a forest science research centre at Ponnakkudi near Tirunelveli. Under SIDA scheme, about 700 ha. area is developed every year.

Talukwise details on area under social forestry from 1987 to 1995

The areas covered under Social Forestry scheme are mainly tank beds maintained by Public Works Department or Panchayat tanks either system or rainfed tanks. Among the taluks, Nanguneri, Sankarankoil, and Sivagiri taluks have large areas under social forestry scheme which have 1255 ha; 1225 ha; and 1182 ha. respectively. The area under social forestry in Tirunelveli taluk is 873 ha; in Palayamkottai 332 ha. The areas in Radhapuram, Ambasamudram and Tenkasi taluks are 995 ha; 796 ha; and

243 ha. respectively. Shencottai taluk has only 37 ha. under Social forestry. Under social forestry scheme block planting in tank foreshore and interface forestry are implemented in the district.

Block Planting

Under block planting, planting of Babul is done mainly in Public Works Department and Panchayat tank foreshore. Afforestation work is labour oriented. Only polybags are purchased for raising seedlings. The details of area planted and the cost incurred for that from 1987 to 1995, are furnished below:

Year	*Planting area covered under (in ha)*	*Total cost (in Rupees)*
1987-88	969.00	6,17,989.00
1988-89	1249.00	17,65,794.00
1989-90	805.00	22,55,900.00
1990-91	757.00	28,40,398.00
1991-92	700.00	16,77,716.00
1992-93	701.00	27,15,933.00
1993-94	731.00	26,20,121.00
1994-95	541.00	20,90,939.00
1995-96 up to 31-1-96	485.00	15,63,683.00

Apart from raising plantations in tank beds, plantations are also raisd in Poramboke hillock, road side avenue, river, canal, tank bunds and railway line. These plantations are raised mainly for biological upgradation. The plantations raised in tank beds are mainly to augment supply of fuel wood and small timber.

Interface Forestry Scheme

This scheme which was introduced in 1989-90 is implemented in degraded forest area lying nearby villages. Mayamankurichi reserve forest and Kottamalai have been selected for implementation of Interface forestry scheme, beneficiaries for which are selected from surrounding villages and a committee is formed. After through planning with villagers, the plantations are raised to sent their needs of fuel and fodder. Minor forest produce like Tamarind nalli, etc., available in Reserve Forest area are allotted to commitee and in turn villagers protect Reserve Forest from

illegal cuttings of tree. Moisture and soil conservation works like checkdam and percolation ponds are constructed to improve ground water which in turn will help agriculture .The area covered under this scheme is as follows:

An analysis of the achievement of the Inter face Forestry scheme for the period between 1989-90 and 1994-95 reveals that there are fluctuations in the area covered in that period. In 1989-90, the area covered under scheme was only 40.00 ha. This increased to 167.60 ha. in 1990-91. Subsequently, there is a decrease in the area covered. It was 166.47 ha. in 1991-92, 150.00 ha. each 1992-93 and 1993-94 and 110.00 ha. in 1994-95. Further under interface scheme training is imparted to build skill for their self employment like tailoring, basket making etc.

Under Social Forestry mainly babul plantations are raised in community wasteland like Public Works Department tank bed and Panchayat tank bed. These plantations are raised on 10 year rotation basis. The matured plantations (10 year old plantations) were sold in public auction. Up to 1988-89, 50 per cent of the total sale amounts realised were given to Panchayats. From 1989-90 onwards 60 per cent of sale amount realised were given to Panchayat. The amount given to Panchayats from 1987 to 1995 are furnished below:

Sl. no.	*Year*	*Total revenue realised by way of sale of mature plantation.*	*50% of revenue up to 1988-89 and 60% of revenue from 1989-90 disbursed to panchayats.*	*Number of panchayats benefited*
1.	*2.*	*3.*	*4.*	*5.*
1.	1987-88	5,92,240.00	2,96,120.00	10
2.	1988-89	2,01,529.00	1,00,764.00	7
3.	1989-90	42,71,964.00	23,21,245.00	35
4.	1990-91	45,38,207.00	24,95,853.00	37
5.	1991-92	71,90,948.30	43,14,569.00	57
6.	1992-93	93,90,820.00	56,34,494.00	57

Free supply of Seedlings

Seedlings are supplied free of cost to Public and Government institutions as a campaign to make area green and improve ecological status. This scheme is implemented from 1989-90 onwards and the details of seedlings distributed under this scheme are furnished. In 1989-90 about

97715 seedlings were distributed. Number of seedlings distributed in the subsequent years were 63,000 in 1990-91, 38,000 in 1991-92; 46400 in 1992-93; 60000 in 1993-94 and 50000 in 1994-95.

Agricultural Marketing

It is with the objective of educating the farmers about the post harvest technology of reaping maximum return for their produces that the Agricultural Marketing scheme was introduced. It renders free service to producers by grading their produce and frees them from the clutches of the middlemen in marketing their produce. The regulated markets functioning under the control of the Agricultural Marketing Department products the interests of agriculturists through its well planned measures. Agricultural marketing covers a wide spectrum of economic activitiy from the producers to the consumers. AGMARK is a shortened form of agricultural marketing which represents the standard of agricultural and livestock products packed and marked as per the provision of the Agricultural Produce (Grading and Marking) Act. The grading of agricultural commodities is aimed at ensuring purity and quality products under the seal of Agmark to the consumers and also to facilitate marketing practices at various stages. It ensures remunerative prices to the produces. In Tirunelveli district AGMARK grading is carried out for a number of commodities like vegetable oils, ghee, honey, ground spices, rice, wheat atta, pulses, coriander, eggs, etc.

Sankarankoil, Tenkasi, Ambasamudram, Valliyoor, Tirunelveli at Ramayanpatti,Pavoorchatram,Kadayanallur,Thisayanvilai, Tiruvenkadam, Sivagiri, Alangulam are the places where Regulated Markets are functioning. The important notified commodities are cotton, chillies, coriander, pulses, paddy and groundnut. The two places that have AGMARK laboratories in the district are Tirunelveli and Tenkasi. Commercial grading centres function at Ramayanpatti, Pavoorchatram and Sankarankoil Kapas grading centre is at Sankarankoil.[14] The agricultural officers are imparted one month training in chemistry and related matters by the Deputy Agricultural marketing Adviser, Govt. of India, Chennai and three months training is imparted to graders and supervisors by the Agricultural Marketing Department of the Government of Tamil Nadu. One year Diploma in Agricultural Marketing sponsored by the Government of India is also imparted.

Tamil Nadu Cooperative Marketing Federation Ltd.

The Tamil Nadu Co-operative Marketing Federation also known as TANFED is an apex level Federation in Tamil Nadu which is engaged in the distribution of agricultural inputs like fertilizers, seeds, pesticides and agricultural implements, marketing of agricultural commodities, manufacture of certain inputs including fertilizers.

The Federation identifies the agricultural input requirement of the farmer members of primary cooperative banks and arranges storage and distribution facilities to them through cooperative outlets. It provides market support to the affiliated membe societies in processing, storing and marketing of agricultural commodities. It makes storage facilities of specialised nature for select commodities. It undertakes production/ processing of agricultural inputs such as granulated fertilisers, manure mixtures, etc.

TANFED's achievements during the year 1992-93

Sl.no.	*Activity*	*Activities in the district.*	
		Quantity (in tonnes)	*Value* (Rs. in lakhs)
1.	Fertilizer distribution	17,011	631.66
2.	Agricultural marketing	15.560	4.10
3.	Pesticides distribution		22.65
4.	Seeds distribution		1.40
5.	Agricultural implements distribution		0.03

Special Officer, TANFED, report dated 19 August 1993

Tamil Nadu Agro Industries Corporation Ltd.

The Tamil Nadu Agro Industries Corporation Ltd., a Government of Tamil Nadu undertaking, had set up a Regional Centre at Tirunelveli to cater to the needs of farmers in the Tirunelveli District. The corporation is engaged in the sale of tractors, power tillers, matched tools and implements for tractors and power tillers, spare parts, etc. It also sells chemical fertilizers to agriculturists and pesticides to agents. [15]

Achievements of the Corporation from 1987-88 to 1992-93

			Engineering			(Rs.in lakhs)			
	Tractor		Powertiller	Imp.		Spare parts		Fertilizer	
		Qty.	Value	Qty.	Value	Value	Value	Qty (in MTS)	
1.	1987-88	-	-	1	0.33	0.86	8.31	701	MT
2.	1988-89	3	3.6	4	1.68	0.86	8.56	965	"
3.	1989-90	5	6.8	3	1.05	0.16	9.58	1712	"
4.	1990-91	-	-	13	4.62	-	12.47	1370	"
5.	1991-92	-	-	14	7.00	1.05	15.48	1610	"
6.	1992-93	-	-	62	33.62	3.18	10.32	8377	"

Famines

Famines more or less severe, were of constant occurrence during the seventeenth and eighteenth centuries and Tirunelveli experienced little of famine or scarcity in British times. In 1811 the ravages of the epidemic fever was succeeded by widespread agricultural distress, to which the unseasonable weather also contributed. In 1847 the north-east monsoon failed, and with the exception of the Tamiraparani valley and the villages on the upper Chittar, the district experienced severe drought, vast areas both of wet and dry land being left uncultivated. Remissions to the extent of three quarters of the assessment in the case of wet lands and half the assessment in dry lands were granted, the cultivation of tank beds was allowed, and the frontier duties on grain were suspended. During 1877, the district faced serious difficulties when almost every district was in the grip of famine. The local rainfall had been insufficient. Sankarankoil and Nanguneri taluks received the rainfall below the usual average between April and September in 1877. More than half the dry cultivation of the district began in November, and the prospects of saving the dry crops began to appear very slight. The rain-fed tanks and even the smaller rivers of Nanguneri and Sankarankoil taluks were beginning to dry up. The prices of paddy and cumbu had more than doubled. By January 1877, relief works were opened in Nanguneri, Sankarankoil. Collection of road materials and the sinking of wells were the chief relief works. A system was organised of watching villages closely and drafting to the relief works people in danger of starvation. In Nanguneri numerous tanks and channels were repaired, and the road from Tirunelveli to Rajapalayam through Sankarankoil was laid out. In the end of May 1877, a relief camp was started in Nanguneri. Nanguneri and Sankarankoil taluks showed a marked decline of population.[16]

Floods

Floods, confined mostly to the valley of the Tamiraparani, were fairly frequent, the most serious had occurred in the years 1810, 1827, 1847,1867, 1869, 1874, 1877 (two floods), 1880, 1895 and 1914. With the exception of the flood of 1847, all these visitations occurred during the period of the north-east monsoon. In 1810 rain began to fall on the 6th December, continuing with unprecedented violence for 30 hours. On the right of the 7th the river-valley was inundated; many lives were lost and more than a thousand houses swept away; many large tanks were breached. The disaster of 1827 exceeded any that had occurred within people's memory. For three days, Tirunelveli and its neighbourhood were under water, the inhabitants were with difficulty rescued from their house tops in boats. Cattle were swept away in hundreds, and hardly a single article of property in the town was saved. Tanks and water courses were almost obliterated. Many villages were under water for several days and

as the water receded, the roofs were seen reposing in lines upon the banks of slime which had once composed the walls of the houses. The flood of 1847, which occurred during April, was on a comparatively small scale. In 1867, after a downpour of 24 hours, the river rose to a height of 24 feet at Ambasamudram and 16 feet at Palayamkottai. For miles the river, fields and channels presented a continuous sheet of water; the bridge which was under construction over the Gatananadhi was washed away. The cyclone of November 1869 exceeded all its predecessors, in violance. At Palayamcottai the river reached the unprecedented height of 26 feet; the bridge was wrecked, the four middle arches were swept away. The large Krishnapperi tank to the North-west of Tirunelveli town breached and the streets were flowing with four feet of water; four of the eleven arches of the bridge at Ambasamudram were carried away; the new bridge over the Nambiyar at Tirukkurunkudi was completely washed away. Innumerable channels and tanks throughout the district were breached; new road from Palayamcottai to Toothukudi was seriously damaged. In 1874, under the influence of north-east monsoon the Tamiraparani river rose at Palayamkottai by eight feet on 26 November. The Tirunelveli channel and the Krishnapperi tank breached, and the town of Tirunelveli was again flooded. Tirunelveli was completely cut off for a time from Palayamkottai. Over 200 houses, mostly of the more unsubstantial dwellings of the poor, were destroyed in the town; but there was no loss of life. In the 1877 floods, following almost immediately on the famine of the year, over a hundred tanks in Nanguneri taluk were breached. In the Radhapuram division, about 80 tanks had breached in the heavy rains. The next serious flood occurred on 30 and 31 December 1895. Thirteen persons who were sleeping in the big *mantapam* in the river bed just above the bridge were cut off and swept down the stream, all being drowned except one boy who managed to cling to a tree lower down and save himself. A great part of the town was flooded, mud houses were swept away. Roads, tanks, and channels throughout the river-valley were damaged. In 1914, the Tamiraparani was in high flood from 30 November to 8 December. The railway bridge at Cheranmadevi was wrecked. Minor irrigation tanks in all parts of the district were breached. For several days communications between Tiruchendur and Palayamcottai were cut off. Serious damage was caused to the roads and paddy fields. Floods in the Nambiyar and Karumanaiyar coincided with those of the Tamiraparani. During the unprecedented floods of 1923, a new village to accommodate people of the depopulated Kansapuram village, then in danger, was formed on a higher level, within a short distance of five km. from Kansapuram. This

new village is called Burkit managaram, going after the name of Mr.Burkit, a former Collector of the district. In the year 1931, there were floods in the Tamiraparani river, the flood level in the Tirunelveli bridge in December 1931 was 29 feet against 30.5 feet in 1923.

The heavy rain that battered the district due to cyclonic pressure during the north-east monsoon period between 12-14 November in 1992 and 6-14 November in 1993 caused extensive damage to crops, roads, irrigation sources, electricity, human lives and cattle in Tirunelveli, Palayamkottai, Tenkasi, Shencottai, Sivagiri, Ambasamudram, Nanguneri, Radhapuram and Sankarankoil taluks. The total loss incurred in the 1992 floods was estimated to the extent of Rs. 10153 lakhs to the district restore the flood affected works.; A sum of Rs.12,60,000/- was disbursed in 1992 to the kith and kins of 63 victims spreading in Sivagiri, Shencottai, Nanguneri, Radhapuram, Ambasamudram and Tenkasi taluks. The number of deaths in Ambasamudram taluk was 34, Shencottai 18, Tenkasi and Radhapuram four each, Sivagiri two and Nanguneri one. About 17499 houses were damaged (10305 houses partly and 7194 houses fully) and a sum of Rs.61,73,250/- was disbursed to the damaged houses.[17]

During November 1993 floods, there was no loss of human life and cattle life but there was loss to agriculture and pisciculture. The damage to kar paddy crops was to an extent of 1500 hectares in Tirunelveli, Palayamkottai, Ambasamudram and Nanguneri taluks and the loss was to the extent of Rs.85 lakhs. A nursery to an (Fisheries) extent of 45 hectares was water-logged and damaged in Tirunelveli, Palayamcottai, Ambasamudram and Nanguneri taluks and the loss was estimated about Rs.0.34 lakhs. There was a breach in Ponnakudi tank causing damage to Paddy nursery, sunflower, vegetables etc.

During December 1993 rain, there was damage to agricultural crops especially paddy, groundnut and cotton. The paddy crops to an extent of 655 hect. spreading over Tirunelveli, Palayamkottai, Ambasamudram,Tenkasi and Shencottai taluks were damaged. Groundnut loss in Radhapuram taluk was 60 hect. and damage to cotton and greenbeds in Tirunelveli were 8 hect and 20 hect. respectively and the estimated loss was about Rs.5,67,500/-. Over 1579 houses were completely damaged and 2669 houses were partially damaged in this district. The particulars of damages to houses and expenditure incurred due to heavy rain during the months of November and December 1993 are given in *Appendix* - 7.

IRRIGATION

Right from the days cultivation started, the aspect of irrigation was given considerable attention. Tamil people built their civilization around irrigation. Irrigation has throughout Tamil history provided a proven means to raise land productivity. Farmers in medieval Pandyamandalam used both water diversion and storage techniques; they built dams, channels and tanks to make unpredictable natural run off nourish paddy plants throughout the growing season. The Tirunelveli district situated right under the united ghats enjoys the benefit of the early showers thanks to south -west monsoon and of the later rains of the north-east monsoon.The total fall, though is light, averaging about 27 inches, is generally well distributed. The Tamiraparani river, which rises in the Ghats, affords perennial irrigation to a fairly large area on which two crops are normally raised. Several tanks and wells form part of the other source of irrigation.

Drainage control technology that was known at the latest by the ninth century was adapted, refined and extended throughout Tirunelveli over the next millennium. The technology spread through the region by slow adaptive diffusion, as farmers exploited its potential for water control in an increasing array of milies and locally advantageous combinations. There do not seem to have been dramatic technological revolutions, but very long term trends made the landscape much more technically complex and productive in 1800 than it had been under the Pandya Kings. New techniques for water control came into the region with migrants, who perhaps also brought new engineering skills and certainly helped to create the organisational capacity to build ever larger and more permanent works. Thus as the region more intensively farmed over the centuries, the range of irrigation technologies grew, and so did the range of production milieu into which irrigation could be creatively fitted. Throughout Tamil history, construction of irrigation works involved digging and building to drain the flow of water; the techniques, materials and productive outcomes shaped the land itself, but were at the same time shaped by the character of each setting. Technologies for construction of irrigation works appear to have improved markedly throughout the whole of Tamiraparani river basin. The Pandyas and the Nayaks who ruled this part of the country have provided the district with an elaborate anaicuts, channels and tanks. Their work still today proclaims their grasp and mastery of the principle of irrigation. The sources of irrigation in the district are the rivers, channels, tanks and wells. The tanks which are in large number, situated in most advantageous positions, serve to store the surplus water of the rainfall in the plains and play a significant role in the irrigation of this area. This district is chiefly irrigated by the rivers rising in the western ghats of which Tamiraparani is the most important one. The other rivers included in the Tamiraparani system are Ramanadhi, Gatananadhi, Koraiyar, Jambunadhi and Manimuthar

which are tributaries of the Tamiraparani. They mingle with waters of Tamiraparani within Ambasamudram taluk.

The river and its affluents which are crossed by anaicuts, feeding irrigation channels and tanks irrigate nearly about 83000 acres of land, mostly of double crop. There are eight anaicuts across the river Tamiraparani besides three dams, two above Papanasam and one at Manimuthar near Kallidaikurichi. In Papanasam, water is stored and released by regulation for generation of electricity and irrigation. The Manimuthar project completed under the Second Five Year Plan in 1958 comprises a reservoir of 5500 mcft capacity built across the Manimuthar river, a tributary of the Tamiraparani. The reservoir supplements supplies to 83000 acres of existing lands under the several Tamiraparani channel and rainfed tanks in Ambasamudram, Nanguneri, Tirunelveli taluks in Tirunelveli district and Srivaikuntam and Tiruchendur taluks in Toothukudi district. A canal 45 kms. long, taking off at a high level from the right side of the dam supplements supplies to about 300 existing rainfed tanks. Of the old anaicuts except under Kodaimelalagiyan and Nadhiunni anaicuts almost all the irrigation is direct. Under Kannadiyan, Ariyanayagipuram, Palavur and Suttamalli tanks which are filled in several times in a season and an equal extent through channels.

Large tracts of land in Ambasamudram, Tirunelveli taluks are irrigated by the river Tamiraparani. The Kodaimelalagiyan, the Nadhiunni and the Kannadian anaicuts irrigate Ambasamudram taluk. The Kodayan channel from the Ariyanayagipuram anaicut, the Palayam channel from the Palavur anaicut and Tirunelveli channel from the Palavur anaicut and Tirunelveli channel from the Suttamalli anaicut serve Tirunelveli taluk. The rivers having the benefits of both the monsoons have perennial supply of water and have the fertile lands on either side, especially on the Upper reaches of the Kannadiyan, Kodagan and Palaiyan channels. In these areas two crops are raised and that too, mostly paddy. The irrigation system of the Chittar with its numerous affluents, the chief of which are the Hanumanadhi and the Karuppananadhi come next in importance to Tamiraparani. The river which is crossed by 18 small anaicuts irrigates considerable area in the Tenkasi taluk and smaller areas in the Tirunelveli taluk. The last anaicut in the Chittar Irrigation system is at Gangaikondan which is about 13 kms. above the point where in the village of Sivalapperi the river joins the Tamiraparani. The local rains, added to the floods descending from the hills assure almost all the year a full supply between October to January to raise pishanam crops. Nanguneri taluk is irrigated by the Pachaiyar, the Kila Manimuthar, the Nambiyar, the Hanumanadhi and the Karumaniyar. The Pachaiyar is its lowest reaches also serves a part of Tirunelveli taluk. The wet lands in Sankarankoil form only a very small fraction of the total cultivated area. There are no large rivers suitable for irrigation. There are

numerous streams which feed many small tanks near the hills. The only river which crosses the eastern plain is the Vaippar whose bed for a great part of the year is dry. The streams which supply the small tanks are swift and bring with them much sand. The irrigation of the wet lands under the hills is more similar to that of the lands in Nanguneri. In the Shencottai taluk, a reservoir was constructed in Mottai river at a cost of Rs.3.5 lakhs, irrigating 270 acres, under the Second Five Year Plan. Across the Kuliratti river, a reservoir has been built at the estimated cost of Rs.6.84 lakhs which would irrigate an extent of 356 acres. Wells supplement other irrigation sources. Well irrigation is prevalent on the dry, black soil areas and in the Teri regions of Nanguneri taluk. Ambasamudram taluk is served by the Manimuthar, the Gadana river and the Varahanadhi. The Chittar river, the most important of the tributaries of the Tamiraparani irrigates some considerable area in the Tenkasi taluk, and a smaller part in the Tirunelveli taluk. Nanguneri taluk is served by the Pachaiar, the Nambiar, the Kilamanimuthar, the Hanumanadhi and the Kammaniar. The Pachaiar in its lower reaches also serves a part of Tirunelveli taluk. Sankarankoil taluk is served by the rivers Vadamaaliar, Kottamaaliar, Nikshepanadhi, Kakanadhi and the Palayar.

Two of the four dams that water the land around Tirunelveli were built after 1400, and a later grant mentions "Sundara Pandya's new channel", almost certainly the right-bank channel from the Marudur anicut. During the Centuries after 1200, men of means patronized the construction of four permanent stone dams some distance apart in the riverbed, from Ariyanayakipuram in the west to Marudur just to the east of the mid-course bend in the river.

By the 16 Century, when the Nayaka kings established their southern headquarters at Tirunelveli town, the Tamiraparani valley provided a continuous irrigation land scape stretching from mountains to sea, a ribbon of green whose development had, by the 1500s, continued for two thousand years. During Sangam times the core zone of irrigation development had been deltaic nadus, which depended on inundation.

Irrigation, and the Tamil term nanjai, had acquired by 1500 a range of practical meanings in agriculture, because farmers applied skill in water control to various milieus, with distinct results in each. Where drainage was abundant, farming could concentrate to grow crops of all kinds. Where seasonal spates were short-lived and meagre, farmers had to secure themselves against the possibility that water in the tank would not suffice to bring a water-intensive crop like paddy to maturity. This required the adaptation of many crops to cultivation under tank irrigation, and a practice developed called nanjai-mel-punjai "dry crops on wet land". Well-digging also became increasingly important in the mix of agricultural technologies as farmers pushed into the agricultural frontier after 1300. Extensive use

of wells in agriculture must have entered the agricultural scene with migrants who came into the region during centuries after 1300. They most closely identified with well technology in the Nineteenth Century. Nadars, Naidus and Reddis concentrated their activities in areas of poor drainage where wells remain to this day of greatest productive importance. These new farmers created a new style of intensive agriculture. The district, the major portion of which is covered with unfertile soil, ` could be able to produce more than those of the districts placed in similar geographical area. The sources of irrigation in the district are the rivers, channels, tanks and wells. The tanks which are in large number, situated in most advantageous positions, serve to store the surplus waters of the ordinary rainfall in the plains and play significant role in the irrigation of this area.

The district is chiefly irrigated by rivers rising in western ghats. The dams and anaicuts constructed on the Tamiraparani and Manimuthar rivers serve both agriculture and power generation.The other rivers included in the Tamiraparani system are Ramanadhi, Gadanadhi, Koraiyar, Jamunadhi and Manimuthar all of which mingle with the waters of Tamiraparani within Ambasamudram taluk. The river and its affluents which are crossed by anaicuts, feeding irrigation channels and tanks irrigated about capacious and a few of them if once filled can hold enough water for a season.

A general feature of the district as described by Stuart is that it is a narrow green winding ribbon, with a silver thread in its centre, represents the Tamiraparani with its irrigated land; north and south are wide areas of red sandy land undulating in broad and gentle slopes, studded with numerous tanks of all sizes and shapes, each with its little patch of green rice below it; to the north plains, in the dry season black and bare, but when cultivated an unbroken stretch of cotton, cholum and cumbu and dotted with numerous tanks are found in the region. The system for utilising every available source of water supply, with its numerous stone anaicuts across the rivers and streams, its channels and its tanks, is believed to have originated about the 15th Century.

Manimuthar Reservoir Project

From the northern slopes of the Agasthiarmalai range, an easterly protrusion of the western ghats at an altitude of about 6000 ft. rises the river Manimuthar, a principal tributary of the Tamiraparani river. The flashy monsoonic floods in the river, which had hitherto been going to waste into the sea are to be conserved mainly for the benefit of the fertile tract of the Tamiraparani irrigation system, and secondly to fill up several irrigation tanks in the district. The reservoir is at a place across the Manimuthar river, about 6.4 kms. south west of Ambasamudram town. The reservoir is formed partly by solid gravity type of masonry dam and partly by earth dam at the flanks. The central portion of the masonry dam

at the river crossing is an Ogee over flow dam about 334 feet long between the two abutments, designed to discharge a maximum flood of 60000 cusecs from the catchment of the river at dam site. The overflow dam is flanked by masonry bulkhead dams of suitable lengths on the left and right planks, respectively of the earth dam beyond the bulk head dam is about 5460 feet on the left side and about 2580 feet on the right side. The total length of the dam from one end to the other is about 9270 feet. The reservoir stores a total quantity of about 4000 m.c.ft. up to the spillway crest. After installing 15 feet high left shutters the capacity is increased to 5500 m.c.ft.[18] Preservation of the rich and fertile agricultural valley of the Tamiraparani river is the vital part of the Manimuthar reservoir. Secondly, about 48 km. length of the main canal, taking off from the reservoir supplies hundreds of rainfed tanks in the uplands and bring the rich crops to fruition.[19]

Manimuthar reservoir was built across the Manimuthar in the Tamiraparani basin at a cost of Rs.505 lakhs near Ambasamudram. The work was started in 1951 and completed in 1958. The catchment area is 161.61 sq.km and it is designed to discharge 1699.20 cumecs of flood water. The full reservoir level is + 109.12 m and its maximum water level is 109.12 m. The area at F.R.L is 9.40 sq.km. The capacity at F.R.L is 156.07 Mcum. It is a masonry *cum*-earth dam with (+ 112.17 m) top of roadway. The maximum height of the dam is 45.72 m. The length of earth dam is 2552.7 m and masonry is 273.1 m. The spillway has seven vents with the size of 12.19 x 4.57 m each. The crest level is + 104.55. The spillway is provided with lift gates which could discharge 1710 cumecs flood waters. The river sluices have four vents with the size of 1.52 m x 1.83 m. The sill level is + 73.15 m and it could discharge 212 cumecs. There are three vents in the canal sluice with the size of 1.52 m x 1.83 m. The sill level is + 97.54 m and it could discharge 12.60 cumecs. The total length of the main canal is 46 kms. with the capacity to discharge 12.6 cumecs flood surplus. The total under irrigation of the ayacut is 8093.83 ha. benefiting Ambasamudram, Tirunelveli, Nanguneri taluks in Tirunelveli district and Tiruchendur and Srivaikundam taluks in Thoothukkudi district. Apart from the main canal sluice, there are two other sluices one to feed the Perungal channel and the other to discharge into an odai feeding a few tanks.[20]

Manimuthar reservoir has a seepage through the structure, especially through masonry blocks five to ten. The seepage had been more at full storage depth through the masonry portion alone. To arrest it and to renovate the dam a 'dam safety team' from Government of India comprising engineers and geologists, after extensive studies of the dam in 1991-92, recommended (upstream face treatment technology) with grouting by micro concrete infection after removing the old plastering and raking up mortar joints and then finishing them with a synthetic sealant. The Government

undertook the work at an outlay of Rs.39 lakhs with financial assistance from the World Bank. under its *Dam Safety Assurance Project*. Under this project, the damaged plastering on the masonry face was removed and the joints were exposed. After identifying the weak joints by hammer testing and scraping, these were raked out to remove the lose materials. Holes for fixing nipples for grout pumping arrangements were drilled. The raked out joints and nipple holes were then cleared with compressed air to remove loose particles inside the cavities. A cleaning agent (Reebaklans fluid) was then applied to remove organic impurities and the joints were water washed. A bonding agent was then applied in the cavities and the nipples fixed. After setting of the cement ceiling, the cavities were filled with grout infection with non-shrinkable cementacious material (micro-concrete)namely Renderoc-RG in the appropriate water-cement ration to give required consisting for pumping. The pumping was done through each nipple until the grout juice came out through the adjacent nipples. Then the grouting was shopped in the nipple, the nipples were then folded and tred and left to set. All the joints were likewise treated, grouting was stopped in the nipple, the nipples were then folded and treated and left to set. All the joints were likewise treated, grouting was completed and allowed to set. After the process, the nipples were cut and the cement ceiling applied to hold the injection was removed. The joints were then water washed and dried. Then a bonding agent was applied on the groove and surface thus cut. The joint was then rendered smooth with a cementacious mortar to receive sealant treatment and allowed to set. The synthetic sealant was then applied and finished flush after treating with a bonding agent.[21]

The river Tamiraparani is one of the principal sources of irrigation in the Tirunelveli and Thoothukkudi districts. The river rises in the eastern slopes of the Western Ghats which divide the Tirunelveli district from Kerala and after having a course of about 96 km. falls into the Bay of Bengal. Extension of irrigation was encouraged by removing restrictions on increase of the ayacut under major irrigation sources during the period before and after 1943. Further the tempo of activity on Irrigation Development scheme was increased in Tamil Nadu.

Papanasam Reservoir Project

The first reservoir to come up in the Tamiraparani basin is the Tamiraparani reservoir otherwise called "Hopelake" or Papanasam reservoir.This Project was mainly intended to conserve the flood water in the upper reaches of the Tamiraparani and to regulate their distribution to benefit Tirunelveli and Thoothukkudi districts. First Colonel A.T.Cotton suggested it and subsequently Captain Horsley in 1854 made a proposal to construct a dam about two km. above the Sorimuthayyan temple and eight km. from Papanasam falls, a point where the river is not more than a hundred yards broad. The reservoir was to extend up the Valley of the

main river as far as the foot of the famous cataracts of Banathirtham. Below the falls, the Tamiraparani is reinforced on the left bank by Karaiyar and on the right bank by the Pambar which descends from the Singampatti hills.[22]

During the years, 1855 and 1856 the project was examined by the Government and then by Liet. Roberts and was kept in abeyance. In 1872, the project was investigated by Mr.Puckle along with the Gadananathi project and then Mr. Norfor surveyed the site and the proposal was disposed. In 1875 Major Mullins and in 1881, Mr.J.B.Pennington examined the matter but no progress was made. The scheme was reviewed by Mr.Mucleod in 1894 and in 1911 by Mr.Ashe and the scheme was not taken up for execution. Investigation was subsequently made and the Government decided to take up the work. The construction work was started in 1938 and completed in the year 1944. The height of the dam is 176 feet and the length of the dam is 816 feet. Water is brought by two tunnels with eight feet six inches diameter each. The storage of Papanasam reservoir is 156 mm^3 of which the live storage is 150 mm^3. The catchment area of the reservoir is about 150 sq. km. A diversion weir popularly known as lower dam has been constructed below the upper dam. The diversion weir is located below the confluence of Servalar and the main Tamiraparani river and diverts the combined controlled flows of the Papanasam reservoir and the uncontrolled flows of the Servalar to the power house. The total length of the diversion weir is 1350 feet and height is 35 feet. Water is diverted by 'diversion weir' by two surge towers with nine feet diameter and 3500 feet in length. From the surge towers, form tunnels, with a length of 643 feets each are used in the slopes to bring water to the power station located at the foot of the mountains, which about 13 kms. from Ambasamudram railway station and is 310 feets MSL.

As per the agreement between the Electricity board and the PWD, water is released from the dam from time to time. Between 1st June and 15th June 1650 cusecs of water would be released and between 16th June to 31st March, 2300 cusecs of water would be released. At the time of acute water scarcity, water is released under special circumstances. Both Papanasam and Servalar dams have been constructed with the object of power generation and also they serve the need for irrigation. The first phase of power station was started in 1938 and completed in 1944 and the phase - II was started in 1947 and completed in 1951.

Servalar dam

Servalar dam was constructed in the year 1986. The total capacity of the dam is 156 feets. A tunnel connects the Papanasam and Servalar dams. The total length of the tunnel is 3323 meters. Water is discharged through the tunnel from one reservoir to another reciprocally at the time of requirement.[23]

There were nearly three lakh of acres under irrigation in the composite Tirunelveli district of which the areas irrigated by Govt.canal, tanks and wells worked out to 15.7 per cent, 60.7 per cent,and 23.6 per cent respectively. The area occupied only about 3 per cent of the total occupied area or 6.5 per cent of the net area sown. Nanguneri. Sankarankoil and Tenkasi taluks had rainfed area which were at the mercy of the jungle streams and rainfed tanks.

Wells are mostly concentrated in the red soil areas of Sankarankoil and Tenkasi taluks. In addition to these independent or 'ayacut' , wells are also met with in Nanguneri and Tenkasi taluks which serve as supplemental sources to the existing canals and tanks. Sankarankoil taluk would have proved to be a desert but for the large number of wells and fair development of garden cultivation. The wells in this district are neither as deep nor sunk in such rocky beds as in Coimbatore district. The average cost of digging a well under the conditions obtained in the district was about Rs.400/- in 1930-31. Sankarankoil, Nanguneri and Tenkasi have considerable scope for expansion of well irrigation. The principal factors determining the specialisation of a single variety in particular tracts are soil and climate.

Sankarankoil had 13.67 per cent of its cultivated area under cotton in 1910's and the total acreage under Cambodia cotton in Sankarankoil taluk accounted for 72.15 per cent.The cultivation of Cambodia in the Sankarankoil taluk is explained by the fact that it is a red soil area, where that exotic variety flourishes best. Sankarankoil and Karivalamvandanallur were important markets in the Cambodia tract.

Gatana Reservoir (Lat : 8°48'N Long: 77°19'E)

Gatana reservoir, which is an earth dam, has been constructed across the Gatana nadhi in the Tamiraparani basin near Ambasamudram, at a cost of Rs.212 lakhs for irrigating 404.69 ha. The work was started in the year 1967 and completed in 1974. The catchment area is 46.46 sq.km. and has been designed to discharge 758.98 cumecs of flood water.The full reservoir level is +132.59 and the maximum water level is also the same. The area at F.R.L is 0.80 sq.km. and the gross and net capacity at F.R.L is the same which is 9.97 M.Cum. The width of the roadway on the top is +135.64 m. The maximum height is 32.92 m and the total length of the earth dam is 1627.63 m. There are seven vents with 7.62m x 3.05m each and the crest size is 129.54 m. The spillway has radical gates and its discharge capacity is 758 cumecs. There are three vents in the river sluice with 1.52 m x 1.83 m and the sill level 106.68 m. It has the discharging capacity of 138.48 cumecs. Ambasamudram taluk is benefited by the dam.

Ramanadhi Reservoir (Lat : 8°51'N Long: 77°19'E)

This reservoir is a masonry-*cum*-earth dam which has been constructed across the river Ramanadhi in Tamiraparani basin. It was built at a cost of Rs.181 lakhs to irrigate about 202.35 ha. in Ambasamudram taluk. The construction work was started in the year 1966 and completed in 1974. The total catchment area is 16.58 sq.km. and has been designed to discharge 295.94 cumecs. flood water. The F.R.L is +193.24 m and the M.W.L is +193.24 m. The area at F.R.L is 0.39 sq.km. The capacity at F.R.L is 4.3 M.Cum.

The top of the roadway is +195.38 m and the maximum height is 31.09 m. The length of earth dam and masonry is 734.57 m and 103.63 m respectively. There are two vents in the spillway in the size of 9.14 m x 4.57 m each. The crest level is 188.67 m. The spillway has radical gates and it has a discharging capacity of 295.7 cumecs. In the river sluice, there is a vent in the Vadakkal measuring 1.22 m. x 1.83 m and the sill level is 167.64 m. This sluice will discharge 45.88 cumecs. The Vadakkal sluice supplies the new ayacut also. Similarly, there is a vent in the Thenkal measuring 1.52 m x 1.83 m. The sill level is 178.31 m. and it discharges 34.58 cumecs. The total ayacut under the Ramanadhi ayacut is 202.35 ha. mainly benefiting Ambasamudram taluk.

Karuppanadhi Reservoir (Lat : 9°8'N Long: 77°18'E)

Karuppanadhi Reservoir was constructed across Karuppanadhi river in the Tamiraparani basin near Tenkasi at a cost Rs.273.50 lakhs. The work was started in 1971 and completed in 1977. The total catchment area is 29.34 sq.km. and is designed to discharge 356.83 cumecs flood water. The F.R.L is +253.0 m and M.W.L is +253.0 m. and the area at F.R.L is 0.50 sq.km. The gross and net capacity at F.R.L is 5.24 M.Cum. The dam is masonry-*cum*-earth dam type which has roadway on top is +255.44 m. The maximum height of the dam is 34.44 m. The length of earth dam is 850.0 m and masonry is 40.0 m. There are two vents measuring 9.14 m. x 4.57 m each. The crest level is 248.41 m. The gates are radical type and its discharge capacity is 356.9 cumecs. There is a vent measuring 1.52 m. x 1.83 m. and it discharges 42.34 cumes. The total ayacut of the dam is 1163.49 ha. benefiting Tenkasi taluk. This reservoir helps stabilisation of existing ayacut and bridges the gap in cultivation. There is also a sluice for Perungal.

Gundar Reservoir (Lat : 8°56'55"N Long : 77°13'14"E)

A dam across the river Gundar in the Tamiraparani basin near Tenkasi was constructed at a cost of Rs.123 lakhs. The work was started in 1979 and completed in 1983. The catchment area is 9.92 sq.km. and is designed to discharge 264.51 cumecs flood water. The F.R.L is +80.00 m; the

M.W.L is +81.50 m The area at F.R.L is 0.21 sq.km. The gross and net level capacity at F.R.L is 0.71 M.Cum. The dam is a masonry-*cum*-earth dam measuring 297.1 m earth part and 92.9 m masonry. The maximum height of the dam is 14.66 m and the roadway at the top is +83.50 m. There is a uncontrolled weir. The crest level is 80.00 m and the total length is 77.0 m and its discharge capacity is 264.5 cumecs. There is a vent in the river sluice measuring 0.90 m x 1.20 m. The sill level is 69.0 m and its discharging capacity is 12.74 cumecs. The total ayacut is 39.69 ha with a gap and Shencottai taluk is benefited by the dam The reservoir besides stabilising the existing ayacut helps to convert 39.66 ha of single crop area to double crop. There is no separate canal. [24]

Anaicuts across the Tamiraparani river

The early rulers of the South have constructed the existing first seven anaicuts similar to those of Upper anaicut and Grand anaicut across the river Cauvery. The last and the eighth anaicut viz., Srivaikuntam anaicut was constructed much later in the year 1869 during the British days.

The highest of these is rather a dam than an anaicut. It is called by the local people Talaiyanai, the head or first anaicut. Nadiyunni anaicut, about 2.4 km. above Ambasamudram, is probably the most ancient of the anaicuts. It is made of large uncemented stones. "This Nadiyunni anai was made" says the inscription, "as a charitable work by Khan Saheb, in the years of the Salivahana and Quilon eras answering to A.D.1759.The most famous of the anaicuts is that which is called by the English the Canadian anaicut. "Canadian" as corrupted stands for Kannadian, which means the anaicut was built by the Kannadi or Kannadiyan, that is by a Canarese man. The date of the construction of this anaicut is unknown, but it may be placed any time between the commencement of the fourteenth century and the close of the sixteenth. Ariyanayakapuram anaicut which receives its name from the name of the village nearest to it. Suttamalli anaicut supplies water to the Tirunelveli and the neighbourhood areas Palavu anaicut supplies water to Palayamkottai and the neighbourhood. The channel leading from Palavur is called Palaiya's channel, and is attributed, with the original fort of Palayamkottai, to one Palaiyan who was also a Kannadi. Of all the anaicuts on the Tamiraparani the one which irrigates the largest extent of paddy cultivation is that at Marudur, some kilometres to the east of Palayamkottai. The anaicut was almost wholly rebuilt in 1792, during the collectorship of Mr.Torin and great improvements were again made in it in 1807 by Colonel Cardwell.-

All these anaicuts are founded on rock and consequently are Zig Zag in alignment. But a close observation of the alignment brings to light a very special feature. Wherever one channel takes off, the alignment of the anaicut is in the form of letter 'L' with one arm of the 'L' across the

river and the other one 11 to the direction of flow so as to provide a leading approach water way to the channel taking off from the anaicut and also a straight entry of flow into the head sluice which is constructed at the lower end of this portion of anaicut. The scowing vents are located at the right angles to the approach channel a few feet above the head sluice. This method of giving direct approach to the supply channels and the right angular entry into the scowing vent has been able to create a proper cunvasive effect of flow in front of the head sluice, into the scowing vent, thus scowing away the heavier bed load of silt, keeping the channel mouth fairly silt free. Similarly, where two channels take off, the alignment of the anaicut is in the form of an inverted 'U' Typical example of this type of anaicut is the Marudur Anaicut. Most of the ayacut in this river system are raised in two crops in all good years.

The pattern of the direct and indirect ayacut under various anaicuts reveals the natural utilisation of the waters of the river. The first two anaicuts have very little indirect ayacut. This enables utilising the steady continuous flows in the river under these two anaicuts for direct irrigation for one or two crops as the case may be. But as we goes lower down the percentage of direct ayacut gets increased. This is due to the high floods which flow down the river so as to fill up the lesstanks for irrigation facilities. On this basis it is seen that tanks of very big capacities are constructed under the last anaicut where practically the whole of the anaicut is indirect through tanks fed by the flood water of the river.

All the channels that take off from these anaicuts are typical contour channels with irrigation only on one side of the channel. An important feature of the alignment of these channels is that the drainage from the upper channel and high level areas falls into channels or tanks taking off from the anaicuts below. This arrangement ensures utilisation of all the drainage water from the upper region without wasting any quantity of water at any stage and thus very high regeneration of supply as one goes lower and lower.

Cultivation and ayacut

Paddy crop is regularly irrigated by the north east and south west monsoon. The crop raised during the north-east monsoon period (from October 15 to March 15) is called *pishanam crop* and the crop raised in south-west monsoon period (June 15 to September 15) is called *Kar Crop.*

Under the last two anaicuts a peculiar crop called *advance kar crop* is raised from April to August utilising the summer flows in the river. These flows are not utilised by the upper channels, April and May being closure period for maintaining channels. No regular Kar crop will be raised in the lands where *advance car crop* has been raised. Thus this system of cultivating *advance kar* helps spread over the period of cultivation of the

short term crop according to the availability of supply. This causes the situation to a great extent, especially at the fag end of the crop period when the supply position is critical as the advance kar crops would be off the ground by this time and hence there will be no need to supply water to the crop.

The following are the existing anaicuts and channels across the Tamiraparani river in the distrtict:

Sl.no.	*Name of anaicut*	*Name of channels*
1.	Kodaimelalagian anaicut	1. South Kodaimelalagian channel
		2. North Kodaimelalagian channel
2.	Nathiyunni anaicut	Nathiyunni chennel
3.	Kannadian anaicut	Kannadian channel
4.	Ariyanayagipuram anaicut	Kodagan channel
5.	Palavur anaicut	Palayam channel
6.	Suthamalli anaicut	Tirunelveli channel
7.	Marudur anaicut	1. Marudur Melakkal
		2. Marudur Keelakal

Thus there are anaicuts across the river and channels taking off from these anaicuts.

Abstract of irrigation in Tamiraparani system

Sl.no.	*Name of anaicut*	*Regd. ayacut* (in ha.)
1.	Kodaimelalagian anaicut	1281.67
2.	Nathiyunni anaicut	1049.37
3.	Ariyanayagipuram anaicut	2266.69
4.	Kannadian anaicut	4767.30
5.	Palavur anaicut	3557.26
6.	Suthamalli anaicut	2559.69
7.	Marudur anaicut	7175.64

Kodaimelalagian anaicut system

The anaicut is a primitive one. After descending the Papanasam rocks, the river passes through a level reach and then a narrow gauge partly blocked by huge boulders fallen from the hill. Holes have been cut in the rock in which parts are inserted, cross bars with brushwood and staffing are fastened to the uprights and the channels on both sides are thus supplied

with water. But in recent years it has been made into a pucca structure. The anaicut is of 1084′ length with a crest level varying from 262.86 to 264.76. It has two channels and two head sluices.

North Kodaimelalagian channels

This channel takes off from the left side of the anaicut. The head sluice of the channel consists of two vents of size 5′0″ x 6′0″ each with sill at 257.85. The total length of the channel is 11 miles and 7 furlongs. In its course it irrigates through 97 sluices. The ayacut under this channel is 2284.32 acres, out of which 508.04 acres are under single crop, 1631.75 acres are under double crop and 144.53 acres are under rate.

There are 20 tanks under this channel system. Their names with ayacut particulars are furnished hereunder:

Sl.no.	*Name of tanks*	*Ayacut* (in acres)
1.	Idamalaikulam	51.51
2.	Mela Idayankulam	19.28
3.	Keela Idayankulam	24.18
4.	Pettaikulam	35.63
5.	Thirunavakulam	92.48
6.	Navalkulam	28.72
7.	Usilakundukulam	37.72
8.	Kodaramkulam	176.73
9.	Kalichikulam	12.44
10.	Kumarathiruthukulam	12.93
11.	Rangaiyarkulam	21.69
12.	Pallankulam	24.37
13.	Singankulam	75.00
14.	Arasadikulam	23.24
15.	Ananchankulam	31.41
16.	Vagaikulam	225.00
17.	Sumaithangikulam	58.95
18.	Sirpathankulam	37.91
19.	Gnanapatarkulam	7.87
20.	Pudukulam	14.98
	Total	1013.04

South Kodaimelalagian channel

This channel takes off at the right side of the anaicut. The head sluice consists of two vents of size 4'6"x 5'9". The total length of the channel is about eight km. There are 55 sluices, nine open cuts, and four outlets in the channel that irrigate a total direct ayacut of 882.21 which comprises 14.44 acres of single crop.857.30 acres of double crop and 10.47 acres of water rate lands.

Nathiunni anaicut system

This being the second anaicut across Tamiraparani river, was built during pre-British days. The construction of the body wall is such that it is at an angle to the axis of the river so that it could divert the water in the channel in the left side of the river. The anaicut situated at a few k.ms. above Ambasamudram irrigates Kila Ambasamudram, Mela Ambasamudram, Bramadesam, Urkad and Satupathu. Hydraulic particulars of the anaicut are as follows:

Length of anaicut	1690 feet.
Crest level of anaicut	221.27
No.of Head sluice	1
Sill level of Head sluice	217.75
Length of Nathiunni channel	7M.2F.137 feet.
Head sluices vents	2 Nos. 4'6"x 4' 0"
No.od sluices under the channel	83
No.of outlet	1
Sand vents	4 Nos. 2'6" x 3'0"
Ayacut Total	2592.96 Ac.

[Single 193.93 Ac.], [Double:2380.17],Water rate:[18.86]

Nathiunni channel

This channel is taking off from the left and of the anaicut. The head sluice of the channel is provided with two vents of size 4'6"x4'o" with S.G.arrangements. The sill of the head sluice is 217.75. The channel runs for a total length of about 11.3 km. for irrigating an extent of 1052.75 ha. The channel at the tail end branches off into two viz., Urmanathankal and Perurkal and finally empties into the river Gadana. Out of the 83 sluices in the channel 54 are masonry and the rests are either open out or with rough stone dry packed head wall. The only outlet which is provided with S.G.shutter arrangements and sand vents to dispose off any excess inflow in channel at times of flood to Vannanthurai water. The seven inlets that

augment the water to the anaicut are provided with check dams. These inlets are only drainage courses of wet lands on the leftside of the channel.The duty adopted in the channel is 40.The water is distributed in turn system. The channel irrigates 193.93 acres of single crop lands, 2388.35 acres of double crop lands,and 18.86 acres of water rate lands, bringing a total ayacut of 2601.34 acres.

Kannadian anaicut system

The third anaicut across the Tamiraparani river is the Kannadian anaicut is situated just immediately below the confluence of Manimuthar with Tamiraparani river. It is a piece of substantial work supported on a foundation of solid rock. This anaicut, originally constructed by the early Rajahs of the South who ruled then, was rebuilt in 1842 and has later undergone extensive repairs.Hydraulic particulars of the anaicut are as under.

1.	Length of anaicut	1700 feet
2.	Crest level of anaicut	212.90
3.	No.of Head sluice	1
4.	Sill level of Head sluice	205.80
5.	Size of vents of Head sluice	4 Nos. of 4'0"x6'9"
6.	Discharge	434 C/s
7.	Direct ayacut	8731.78 Ac.
8.	Indirect ayacut	3047.92Ac.

Kannadian channel under Kannadian anaicut

Kannadian channel takes off from the anaicut at the right flank from a masonry head sluice. There are four vents of size 4'0"x6'9" for the head sluice under sill level at 205.80. The length of the Kannadian channel is 37 kms. and serves a total ayacut of 11779.70 acres. There are 203 sluices in the channel. The indirect ayacut of the channel system is distributed through 19 tanks tabled below:

Sl.no.	*Names of tank*	*Regd. ayacut*
1	Karukurichi tank	200.97
2.	Pathamadai	264.93
3.	Kadavarayaperikulam	238.91
4.	Pettaikulam	33.03
5.	Piranjerikulam	304.89
6.	Omanallur Melakulam]	620.06
7.	Omanallur Keelakulam]	

8.	Nainarkulam	66.36	
9.	Krishnaperiakulam	65.45	
10.	Edayankulam	16.18	
11.	Melathachankulam	140.31	
12.	Krishnankulam	71.05	
13.	Kilathachankulam	121.21	
14.	Nambanerikulam	284.21	
15.	Vagaikulam	128.24	
16.	Velankulam	193.65	
17.	Kollankulam	102.11	
18.	Sengulam	51.69	
19.	Nandupidithankulam	143.99	
	Total	**3047.94**	
	Direct ayacut	8731.76	
	Grand total	**11779.70**	**Ac.**

Single crop 274.63 Ac., Double crop,11190.64 Ac., water rates 314.43 Ac.

Ariyanayagipuram anaicut system

This is the fourth anaicut across the river Tamiraparani situated in Ariyanayagipuram village. This anaicut is possibly the work of Ariyanatha Mudaliar *who is* popularly known as 'Nayakan' in the old chronicles of this *region.* The following are the salient features of the anaicut; Hydraulic particulars of the anaicut are given below :

1.	Length of anaicut	2337 feet
2.	Crest level of anaicut	164.50
3.	No.of head sluice	1
4.	Sill level of head sluice	159.00
5.	Head sluice vents: 4 Nos.	4'0"x 5'0"
6.	Length of Kodagan channel	15 M. 4 F.
7.	No.of sluice under the channel	88 + 1 Kandiaperi tank sluice
8.	Sand vents	6 Nos.
9.	Discharge at F.S.L.	280 C/s

The total area of the ayacut is 5600.88 acres. Out of this, 2965.66 acre are directly benefited and 2635.22 acres are indirectly benefited. Single crops are grown in 282.51 acres and double crop in 5147.41 acres. There are 17 tanks under this anaicut. The water rate is Rs.171.36.

Kodagan channel

Kodagan channel takes off from the left side of the Ariyanayagipuram anaicut. The head sluice of the channel with the sill level of 159.00 is provided with 4 vents of size 4'0"x5'0" with S.G.arrangements. The channel which is of 25 kms length totally irrigates an ayacut of 5600.88 acres most of which are double crop. It finally empties into a tank called Chatrampudukulam in Karaiyiruppu village. The channel has, barring the Kandipperi tank sluice, 88 sluices, and eight outlets to drain away the incoming abnormal yield from the channel.

The channel altogether feeds the following17 tanks for a total ayacut of 2965.66 acres. The names of tanks with their registered ayacut are:

Sl.no.	*Name of tanks*	*Regd.ayacut* (in acres)
1.	Suthamalli Pudugrammamkulam	442.06
2.	Narasinganallur kulam	120.81
3.	Oppanai kulam	89.10
4.	Mankulam	74.20
5.	Nachankulam	41.13
6.	Ottankulam	77.33
7.	Pettai Periakulam	286.74
8.	Thamaraikulam	138.54
9.	Mulikulam	174.87
10.	Krishnaperikulam	65.33
11.	Kandiapperikulam	499.97
12.	Tenikulam	26.48
13.	Seeniappa Thittakulam	34.25
14.	Ilandaikulam	75.18
15.	Chatrampudukulam	703.89
16.	Chettikulam	50.47
17.	Kattalaikulam	65.25
	Total	**2965.66**

Palavoor Anaicut System

This is the fifth anaicut across the Tamiraparani river situated near the village Palavoor in Tirunelveli taluk. The hydraulic particulars are as under:

1.	Length	2400′
2.	Level	145.45
3.	Sand vents	2 Nos.
	i) Sand vent size 7′6″ x 4′3″	sill 136.10
	ii) Sand vent size 50″x3′x3′	sill 138.10
4.	Head sluice vents	4 Nos.. 5′0″x5′0″
5.	Sill of head sluice	139.25
6.	Discharge	353.50 c/s.
7.	Length of channel	43.2 km.

Palayam channel under Palavoor anaicut

Palayam channel takes off from the right side of the Palavoor anaicut. The head sluice consists of 4 vents of size 5′0″ x 5′x0″. The total length of the Palayam channel is 43.2 km. There are 163 sluices for irrigating a total extent of 8789.42 acres, the direct ayacut being 3735.62 acres. The remaining indirect ayacut of 5053.80 acres are irrigated through 59 tanks.

The various tanks with their respective ayacut by the Palayam channel is as below :

Sl.no.	*Name of tank*	*Regd. Ayacut*
1.	Palayakayal tank	327.60
2.	Mullikulam tank	232.06
3.	Kandan Kattalaikulam	53.73
4	Kuthiraikattalai kulam	88.07
5	Ammankoilkulam	13.39
6.	Marikulam tank	59.41
7	Pottankulam	23.05
8.	Velankulam	32.84
9.	Kilanatham Pudukulam	275.16
10.	Kalladaikulam	31.34

11.	Sivanaperi tank	22.16
12.	Anuthankulam	56.05
13.	Manapadai pudukulam	58.68
14.	Varadacharikulam	74.25
15.	Melapattam pudukulam	70.83
16.	Thamaraikulam	41.26
17.	Kotaram pattakulam	293.95
18.	Melapattam Pacherikulam	135.79
19.	Ramaneri tank	115.71
20.	Krishnaperi tank	19.35
21.	Edayankulam tank	65.45
22.	Keelapattam Keelakulam	145.97
23.	Kolukkattayarkulam	38.77
24.	Nambikulam	63.70
25.	Pottakulam	49.42
26.	Notchikula	55.42
27.	Udayarkulam	35.73
28.	Kalinadamkulam	65.66
29.	Vadakkukulam	158.03
30.	Therkkukulam	111.11
31.	Arasankulam	35.01
32.	Arampanniarkulam	86.13
33.	Sambanthankulam	83.27
34.	Veppankulam	73.33
35.	Alankulam	27.52
36.	Verisankulam	84.37
37.	Ponpathukulam	62.05
38.	Sirukulam	11.27
39.	Pandarakulam	23.49
40.	Alwanerikulam	63.30
41.	Udaiyarkulam	92.46
42.	Vagaikulam	195.05
43.	Seedappanerikulam	31.54
44.	Putheneri Periakulam	179.26
45.	Pottalkulam	84.57
46.	Inam Velankulam	172.65

47.	Utharasankulam	155.02
48.	Kurunagaraperi tank	18.27
49.	Parikulam	166.56
50.	Koraikadykulam	34.61
51.	Mannarkulam	14.80
52.	Inam Kumaranerikulam	16.27
53.	Ariyakulam	---
54.	Sirukulam	172.18
55.	Inam Uthanapandiankulam	41.20
56.	Kuthuparaikulam	29.44
57.	Notchikulam	247.33
58.	Notchikulam tank	0.21
59.	Shanarkulam	27.00
	Total	**5053.80**

Suthamalli anaicut system

Considered to be built during pre British period, the Suthamalli anaicut is the sixth anaicut built across the river Tamiraparani and situated in Suthamalli village of Tirunelveli taluk. A head sluice was constructed in 1877 at the left flank of the river from where Tirunelveli channel takes off.

The length of the anaicut	2731 feet
Crest level of anaicut	138.50
No.of head sluice	1 No.
Sill level of Head sluice	133.00
Size of vents	6 Nos. 4'0"x4'6"
Discharge	378 C/S

Tirunelveli channel under Suthamalli anaicut

The length of the channel is about 27 km. The total ayacut under this channel both direct and indirect through the 19 tanks referred to hereunder, is 6526 acs. The names of the tanks with their ayacut are given hereunder:

Sl.no.	*Name of the tanks*	*Regd. ayacut*
1.	Mannampullikulam	50
2.	Alangaraperikulam	138
3.	Nainarkulam	478

4.	Udayarpattikulam	73
5.	Parayarkulam	47
6.	Alanganerikulam	52
7.	Sambankulam	37
8.	Arugankulam	82
9.	Musanadi and Pudukulam	19
10.	Musanadi and Pudukulam	184
11.	Vannarpetcheritank	559.42
12.	Rajavallipuram tank	488
13.	Kattamkulam	97
14.	Karilankulam	15
15	Palamadam Uthukulam	298
16.	Kalkurichikulam	266
17.	Kundalikulam	33
18.	Shanarkulam or Udayaneri	126
19.	Kuppakurichikulam	464
	Total	**3506.42**
	Indirect ayacut	3506.42
	Direct ayacut	3020.00
	Total	**6526.42**

Korayar

The river Korayar is a tributary to Tamiraparani which is originating on the eástern slopes of western ghats, runs towards in Northern direction and joins the main river Tamiraparani near Vellanguli in Ambasamudram taluk after crossing the Kannadian channel through an outlet. This has no direct ayacut but brings in heavy floods during rainy season to the Tamiraparani river.

Pachaiyar river system

Pachaiyar river is a tributary to the major river Tamiraparani. It takes its origin in the eastern slopes of the western ghats about 12 kms north west of Kalakadu at an altitude of 3000 feet above M.S.L.taking an eastern course thereafter up to Padamberi village it takes a north east direction to empty itself into Tamiraparani river after crossing Palayam

channel near Tharuvai village through an outlet. This river traverses partly in Tirunelveli and Nanguneri taluks. The total length of the river from its origin up to its empty points into Tamiraparani river is about 37 kms.

The tributaries of the river in the higher reaches are Kinetard Kavayan Odai, Anaikidangu Odai and these tributaries meet at the junction of Arasapathu and Vadagarai villages. There are altogether nine anaicuts and two mud korambus for irrigating an extent of 7536.23 acres including the direct ayacut of 429.54 acres. The indirect ayacut of 7106.69 acres is irrigated through the various tanks under the anaicut system.

The nine anaicuts and two mud dams are:1. Mud Korambu - Arasapathu village, 2.Madathu anaicut, Palambathu anaicut, Padamaneri anaicut Sambankulam anaicut, Kattalaikadavetti anaicut, Subbu kutti anaicut, Ponnakkudi anaicut, Mud Korambi-Mela Thudiyan village, Thamilakurichi anaicut.

Mud Korambu

The mud Korambu situated in Arasapathu village feeds the Arasapathu tank which feeds an ayacut, of 41.02 acres where single crop is raised.

Madathu anaicut

This is the first anaicut across Pachaiyar situated at the foot of the hills. Vadagarai supply channel takes off from this anaicut to feed three villages. Ambalavamaperikulam (ayacut 48.03 acres), Pambankulam (ayacut 21.50 acres) and Poolangulam (ayacut 71.80 acres) tanks, all of which are in Vadagarai village.

Palambathu anaicut

This is the second masonry anaicut across Pachaiyar, Palambathukal takes off from this anaicut.The Palambathukal tank has 6.75 ha under single crop and the Marankulam (Pappankulam) tank comprises 297.52 ha. under single crop and 134.65 ha. under double crop.

Padamaneri anaicut

This is the third anaicut across the Pachaiyar river. Padamaneri channel takes off from this anaicut to feed an ayacut of 681.48 acres. The eight tanks that are benefited by this anaicut with their ayacuts are given in table below :

Sl.no.	*Names of tanks*	*Single crop*	*Double crop*
1.	Padamaneri kal	4.65	6.38
2.	Padmaneri Periakulam	213.77	142.56.

3.	Muduvarayankulam	23.53	–
4.	Erukkalapatti Periakulam	54.84	23.22
5.	Adhichaperikualm	24.73	1.42
6.	Kovilkulam	27.33	–
7.	Pachalankulam	49.46	55.84
8.	Vagaikulam	29.83	6.64
9.	Ramankulam	17.28	–
	Total	**445.42**	**236.06**

All these ayacut lands lie in the Padmaneri, Devanallur and Idayangudi villages.

Sambankulam anaicut

In this fourth anaicut across Pachaiyar, Sambankulamkal takes off to feed a direct ayacut of 5.76 acres single crop acres and an indirect ayacut of 32.64 acres (double crop) through the tank Sambankulam in Vadamaliasamudram village ayacuts.

Devanallur anaicut

The fifth anaicut across the river, the Devanallur anaicut supplies water through the Devanallur kal which takes off from this anaicut. Six tanks under this anaicut besides the channel are benefited. The lands that are irrigated through these lie in Devanallur, Kallikulam and Kilakaduvetti villages.

Out of seven tanks, three tanks have both single and double crop systems. Devenallur kal has 85.96 ha. under single crop and 8.81 ha. double crop. Devanallur periakulam tank has 92.82 ha. and 178.85 ha under single and double crop respectively. Pothaisuthikulam tank has 68.64 ha. and 10.94 ha. under single and double crops respectively. Therkkulam-Melakulam tank has 139.48 ha. under single crop, Meenavankulam tank has 79.27. ha. under single crop. Kailasaperikulam and Sambakulam tanks have ayacuts of 44.77 ha. and 13.73 ha. under single crop cultivation respectively.

Kattalai Kaduvetti anaicut

This is the sixth anaicut across Pachaiyar.The channel taking off from this anaicut feed only a tank Kattalai Kaduvettikulam which has an ayacut of 85.26 ha. of single crop lands.

Subbukutti anaicut

The seventh anaicut across Pachaiyar is the Subbukutti anaicut from which the Nambireddi channel takes off to feed 2786.24 acres through 42

tanks. The Karungulam kal a branch of Nambireddy channel feeds a direct ayacut of 54.67 acres. The ayacut particulars under the tanks and channels are given hereunder:

Sl.no.	*Names of tank and channel*	*Single crop*
1.	Karungulam kal	54.67
2.	Pulkurichi kulam	127.40
3.	Appankulam and Pettalkulam	43.57
4.	Kangainadankulam	18.12
5.	Karungulam	139.46
6.	Singhikulam	84.47
7.	Kurichikulam	23.19
8.	Naduvakulam	53.69
9.	Sethikulam	17.81
10.	Thattankulam	20.40
11.	Thachankulam	19.04
12.	Pattarkulam	37.51
13.	Perumalkulam	9.86
14.	Kadambarkulam	26.08
15.	Vagaikulam	54.09
16.	Thennarkulam	36.80
17.	Poolanperiakulam	118.50
18.	Ayanerikulam	54.50
19.	Pathinipparai	14.61
20.	Mayanerikulam	45.03
21.	Karuppukathichinna and big tank	130.39
22.	Pullipattankulam	25.24
23.	Sathankulam	88.59
24.	Amburanipettaikulam	99.13
25.	Alwanerikulam	63.96
26.	Vadakkankulam	26.68
27.	Pudukkurichikulam	6.74
28.	Kodikulam	54.30
29.	Muthamperiakulam	94.96
30.	Kuthukkalkulam	51.62
31.	Srivannankulam	46.22

32.	Puliyankulam	38.58
33.	Moonvadaippu periakulam	166.60
34.	Thottakudikulam	240.55
35.	Marudur and Kadambakulam	103.69
36.	Kovaikulam	114.24
37.	Panayankulam	58.05
38.	Paruthipadukulam	95.25
39.	Panayankulam	23.28
40.	Devandraperi	40.81
41.	Sethankulam	69.04
42.	Surulaikulam and Pettaikulam	24.25
	Total	**2690.87**

The ayacuts lie in Kilakaduvetti, Singikulam, Poolam, Thottakudi, Sattankulam, Alwaneri, Muthur and Paruthipadu villages.

Ponnakkudi anaicut

This is the eighth anaicut across Pachaiyar, Ponnakkudikal takes off from this anaicut feeds an indirect ayacut of 2115.20 ac. through the 26 tanks Senkulam channel taking off from this anaicut feeds the direct ayacut of 201.39 acres. The following are the particulars of tanks with their ayacut.

Sl.no.	*Name of tank*	*Single crop*	*Double crop*
1.	Ponnakkudikal	119.09	82.30
2.	Thidiyur periakulam (PWD)	178.62	56.21
3.	Sengulam (PWD)	6.17	219.23
4.	Sirusongulam (PWD)	–	23.70
5.	Kumbathakulam	9.57	–
6.	Sadayanerikulam	50.84	–
7.	Naraikulam	17.56	–
8.	Ponnakudiperiakulam (PWD)	122.69	159.37
9.	Soundarapandiakulam	34.04	–
10.	Mallakulam	41.96	30.66
11.	Pudukulam	59.64	35.43
12.	Kongandaniperiakulam	17.07	58.62

13.	Periapudukulam	94.44	–
14.	Ariyanayagipuramkulam	28.23	–
15.	Veeralappanchellikulam	14.97	30.70
16.	Ayankulam	27.13	27.43
17.	Alwarkulam	51.85	2.34
18.	Velathakulam	42.11	5.99
19.	Nedunchankulam	54.91	6.10
20.	Sevathipattikulam	9.81	7.65
21.	Nedunchar and periakulam	57.84	32.74
22.	Ilayamthukulam (PWD)	57.84	32.74
23.	Itterikulam	92.40	–
24.	Thamaraiselvikulam	113.11	–
25.	Kila Omanallurkulam	5.72	87.60
26.	Muthurpallanaryankulam	15.98	–
	Total	**1383.51**	**933.08**

The villages which are benefited by this ayacut system are: Thidiyur, Sengulam, Ponnakkudi, Pudukulam, Kongarthanperi, Seventhipatti, Itteri, Kila Omanallur and Reddiarpatti.

Mud Kurambu

Mud Kurambu is situated near Melathidiyur village. A supply channel taking off from this anaicut feeds the Ilanothikulam tank which irrigates an area of 124.90 falling in Melathalaiyur village.

Thamilakurichi anaicut

This is the ninth and last anaicut across Pachaiyar which feeds the only tank. Thamilakurichi kulam with the ayacut of 104.45 acres as a single crop.

Maintenance and water regulation under Pachaiyar river system

It is the Public works department which maintains the major tanks and anaicuts and the water regulation is taken care of by the Rural works Department. Frequent crop failures have also been witnessed.

Anaicuts in Pachaiyar river system and areas irrigated by them.

Sl.no.	*Names of anaicuts*	*Single crop*	*Double crop*
1.	Mud Korambu	41.02	–
2.	Madathu anaicut	–	141.33
3.	Pulanbathu anaicut	304.27	134.65

4.	Padmaneri anaicut	445.42	236.06
5.	Sanbankulam anaicut	5.76	32.64
6.	Devanallur anaicut	523.67	198.60
7.	Kattalai Kaduvetti anaicut	85.26	–
8.	Subbukutti anaicut	2690.87	150.04
9.	Ponnakkudi anaicut	1383.51	933.08
10.	Mud Koranba	124.90	–
11.	Thamilakurichi anaicut	104.45	–
	Total area	5709.83	1826 40

CHITTAR RIVER SYSTEM

A major tributary to the Tamiraparani river, the Chittar takes its origin in the eastern slopes of the western ghats in the Courtallam hills at an altitude of about 1600.61 metres above M.S.L. The river for the first 7 kms. runs in the hills and then for about 9 kms. in the northern direction and takes a turn at right angles to take an eastern course.

The major tributaries of this river are Ayindaruviar which joins near Kasimajorpuram village, Govindar which joins near Tenkasi town and the Hanumanadhi which joins the Chittar near Veerakeralambudur village just above Veeranam anaicut. Totally traversing for about 80 kms. the river, in its course receives the supplies from its tributaries before finally emptying into the river Tamiraparani river near Sivalaperi village in Tirunelveli taluk. Chittar is the main irrigation potential for the Tenkasi taluk. The largest tanks under the Chittar irrigation system are the Manur tank (forming one with Ettankulam) with an ayacut of 1843 acres, the Kila Pavur tank (Periyakulam), with an ayacut of 1659 acres, the Gangaikondan tank (Sirukulam), ayacut 793 acres; and the Palamadai tank of Pallikkottai with an ayacut of 681 acres.

The anaicuts across Chittar are Thalai anaicut, Adivattanparai anaicut, Valvilagudi anaicut, Puliyoor anaicut, Pavoor anaicut, Thiruchitrambalam anaicut, Marandai anaicut, Veeranam anaicut, Manoor anaicut, Mettur anaicut, Ukkirankottai anaicut, Pallikottai anaicut, Azhakiapandiapuram anaicut, Pillayarkulam anaicut, Shellianallur anaicut, Piranjani anaicut and Gangaikondan anaicut.

Thalai anaicut

This is the first anaicut across Chittar river and is situated in the high hills in rainfed area. A supply channel called Vaddakal channel takes off to the right side of the anaicut which irrigates a direct ayacut of

442.35 ac. and an indirect ayacut of 856.32 ac. through 17 tanks. All these tanks are under the control of P.W.D. The vadakal channel then bifurcates into another channel called Thenkasi channel which feeds 11 tanks for an indirect ayacut of 611.00 ac. and irrigates a direct ayacut of 147.71 ac. The anaicuts and the channel are under the control of P.W.D. The tanks under Vadakal channel with ayacuts in parenthesis are Pasupathaperi tank (40.21 acres), Melamanikulam (60.00), Keelamanikulam (66.27), Kandanpudukulam (12.00), Sri Krishnanettukulam (14.00),. Velvaludhikulam (41.00), Paraikulam (30.00), Rajakulavanaperikulam (105.61), Manikarayanperikulam (24.00),. Pattapathukulam (138.00), Puliyankulam (19.00), Unanipathukulam (13.00), Thuvarankulam (53.00), Sengurichikulam (34.00), Vettaikarankulam (43.00), Sannanerikulam (29.00), Pirakkalkulam (134.23).

Thus the total ayacut area is 856.32 acres. The tanks under Thenkal channel are Ayinaperikulam 182.00 ac. Valimanickankulam 72.00 ac. Angarahyankulam 131.00 ac. Anganayanpettaikulam, Vettavayalkulam 29.00 ac. Maravankulam 36.00 ac. Kulasekaraperikulam 29.00 ac. Kandukondanaickam 26.00 ac. Keelakangayankulam 22.00 ac. Chettikulam 29.00 ac. Minnavadiseri tank 45.00 ac. The total irrigated area is 611 acres.

Adivattanparai anaicut

This is the second anaicut constructed across the Chittar river just after its entry in the plains. This falls in proper Courtallam village. A supply channel taking off from this anaicut feeds three minor irrigation tanks and a direct ayacut of 114.08 ac. The anaicut and the channel are under the control of the Revenue Department. The tanks with ayacut area are Keelathangaraikulam 65.87 acres, Melathangaraikulam 78.21 acres, and Settipathakulam 13.64 acres which makes a total of 157.72 acres.

Valvilakudi anaicut

This is the third anaicut across Chittar and is in charge of the Revenue Department. The channel taking off from this anaicut irrigates a direct ayacut of 153.27 acres.

Puliyoor anaicut

This is the fourth anaicut across Chittar and is in charge of P.W.D. It is located inside the Tenkasi Panchayat limit near the Tenkasi-Tirunelveli road. Puliyoor supply channel, taking off from this anaicut through a head sluice at the left irrigates a direct ayacut of 381 acres and an indirect ayacut of 911.48 ac. through nine tanks which are Puliyur Periakulam 305.00 ac.Melapattakurichikulam 143.00 ac. Keelapattakurichikulam 269.00 ac. Ilandaikulam 13.94 ac. Nanalkulam 90.00 ac.Melathattankulam, Keelathattankulam 90.54 ac.The total ayacut area under the anaicut is 911.48 acres.

Pavoor anaicut

This is the fifth anaicut across Chittar built of masonry head sluices and sand vents. The Pavoor supply channel takes off from the right side through a head sluice. This channel irrigates a direct ayacut of 488 ac. and an indirect ayacut of 3110.08 ac. though the six tanks which are Melapavoorperiakulam (905.00 ac), Keelapavoorperiakulam (1607.00 ac.),Nagalkulam (350.00 ac.), Kadambanerikulam (127.13 ac.), Thenpathukulam (70.62 ac.), Arasankulam (50.00 ac.)

Thiruchitrambalam anaicut

This is the sixth anaicut across Chittar river. Thiruchitrambalam supply channel takes off in the left side of the anaicut. It irrigates a direct ayacut of 163.00 ac. and an indirect ayacut of 163.25 ac. through tanks whose details are furnished under: Thiruchitrambalam Pettaikulam (112.00), Valudurkulam, Valudurpettaikulam (51.25).

Mavandai anaicut

The seventh anaicut across Chittar is Mavandai from which a supply channel takes off from at the right side. The two tanks fed under this anaicut.The Mavandai tank (296 acres) and Pudur Pananjikulam (274 acres) are under the control of the Public Works Department. In addition, there are 20 minor irrigation tanks viz., Keela vellakkalkulam, Rajapandy tank, Puthankulam, Nallakulam, Puliyankulam, Kulunarkulam Periakjlam, Chettikulam, Kuvisarankulam, Musirikulam, Edayankulam, Thuttikulam, Pallakurichikulam, Anaikulam, Thiruvenkadaperi tank, Vagai tank, Kumaranallur kulam, Chukkankurichi kulam, Vallalankulam, Thulukkan kulam, Karasalkulam. The total direct ayacut under the anaicut is 1361.00 acres and the indirect ayacut is 2543.84 ac.

Veeranam anaicut

This is the eighth anaicut across the river Chittar. Veeranam supply channel takes off on the left side of the anaicut. Veeranam tank which is under Public Works Department, which is fed by this anaicut, has an ayacut of 1407.24 ac. This feeds the Naranatha Venkakakulam and Kidarakulam, the two minor irrigation tanks, having a direct ayacut of 331.15 acres and an indirect ayacut of 2207.70 acres.

Manoor anaicut

This is the ninth anaicut across the river and Manoor supply channel takes off on the right side of the anaicut, which feeds the Manoor (P.W.D) tank with an ayacut of 1863 ac.Further, the following thirteen minor irrigation tanks are fed by Manoor Channel. Pungankulam, Pettaipillai Kulam, Naranammai kulam, Mayamankurichi kulam, Kurappan kulam, Andi kulam, Andikulam pudukulam, Ayyanar kulam, Konarkulam, Anamalai Ayyar

kulam, Thulukkapatti kulam, Erikkalapatti kulam, Kallankurichi kulam. They have direct ayacut of 821.73 acres and an indirect ayacut of 2677.52 acres.

Nettur anaicut

This is the tenth anaicut across this river. The Nettur channel takes off from this anaicut and feeds. Nettur tank (404.00), Kaduvetty tank (209.00), of the Public Works Department. This also feeds the two Minor irrigation tanks viz., Kadayaneri tank and Thulakkar kulam which have a total direct ayacut of 500.10 ac. and 1027.50 ac.respectively.

Pallicottai anaicut

This is the 11th anaicut across Chittar from which Pallicottai supply channel takes off on the right side. Two Public Works Department tanks fed by this channel, are: Pallamadai tank (1478 ac) and Illuppaikulam (211.17 ac) added to these, two are the six Minor irigation tanks fed under this channel.They are, Thalattu kulam, Pattukulam, Kurichikulam, Anamalai kulam, Pungankulam and Pudukulam.They have a total direct ayacut of 249.81 acres and an indirect ayacut of 2135 acres.

Ukkirankottai anaicut

This is the twelfth anaicut across Chittar, a supply channel from which takes off from the left side of the anaicut and feeds Padalayar kulam, Public Works Department tank having an ayacut of 47.18 acres.

Azhakia Pandiapuram anaicut

This is the thirteenth anaicut across the river. A supply channel takes off on the left side of this anaicut which feeds the Azhakiapandiapuram tank and Srikulam, (P.W.D) which together have an indirect ayacut of 440.48 acres.

Pillayarkulam anaicut

This is the 14th anaicut across Chittar, from which the Pillayarkulam supply channel takes off on the right side. The tanks that are fed by the anaicut are Pillaiyarkulam Melakulam,137.17ac. Pillaiyarkulam Keelakulam 250.72 ac. Piramanayinarkulam 25.30 ac which have a total direct ayacut of 66.90 ac. and indirect ayacut of 413.19 acres.

Shellianallur anaicut

This is the 15th anaicut across the river from which a supply channel takes off and feeds Shellianallur (PWD) tank with 316.28 ac.of ayacut, Besides this the channel feeds the Ithikulam minor irrigation tank. The anaicut has a direct ayacut of 67.81 acres and an indirect ayacut of 372.71 acres.

Piranjari anaicut

This is the 16th anaicut across Chittar from which Piranjeri channel takes off to feed, Piranjeri Pariakulam (77.67), Piranjeri Pungankulam (77.22), Paruthikulam (140.70), Pizhai Poruthankulam (73.67) and Pattukudi kulam tanks(40.14) which havse a total ayacut of 409.40 acres. The anaicut has, however, a direct ayacut of 344.39 acres and an indirect ayacut of 409.40 acres.

Gangaikondan anaicut

This is the last anaicut across Chittar. The supply channel taking off from this anaicut feeds the Gangaikondan tank which has a direct ayacut of 216.28 acres and an indirect ayacut of 779.80 acres.

Abstract of ayacut for Chittar river system

Sl.no.	*Name of anaicut*	*Ayacut* (acres)	
		Direct	*Indirect*
1.	Thalai anaicut	590.06	1467.32
2.	Adivattamparai anaicut	114.08	157.72
3.	Valvilakudi anaicut	153.27	–
4.	Puliyoor anaicut	381.00	911.48
5.	Pavoor anaicut	488.00	3110.08
6.	Thiruchitrambalam anaicut	163.00	163.25
7.	Mavandai anaicut	1361.00	2543.04
8.	Veeranam anaicut	231.15	2207.70
9.	Manoor anaicut	821.75	2677.52
10.	Mettur anaicut	500.10	1027.50
11.	Pallicottai anaicut	249.81	2135.00
12.	Ukkirankottai anaicut	421.00	47.18
13.	Azhakiapandiapuram anaicut	–	440.48
14.	Pillayarkulam anaicut	66.90	413.19
15.	Shellianallujr anaicut	67.81	372.71
16.	Piranjeri anaicut	344.39	409.40
17.	Gangaikondan anaicut	216.28	779.80
	Total	9963.83	37062.19
		47026.02	acres.

Aluthakanniar river system

Aluthakanniar, a major tributary to the Chittar river takes its origin in the eastern slopes of the western ghats and joins Chittar after running for about 9 kms. in a north-eastern direction, near Kadabagothi village in Tenkasi taluk. There are eight anaicuts across this river, the first of which is incharge of P.W.D. and the rest are Revenue Department. The river after the first anaicut has a sudden drop of about 150 feet and this falls has been improved to attract the tourists.

The following are the brief description of the existing anaicuts system.

Thalai anaicut

This is the first anaicut built in the reserve forest area and in dense forests. A supply channel takes off from this anaicut at the left flank through an open head and feeds six minor irrigation tanks as detailed below with ayacuts in parenthesis.Peria Channankulam and Chinna channankulam (136.38), Nedungulam periyakulam and Nedungulam pattaikulam (45.07), Shenbagadevikulam and Shenbagadevi Pettaikulam (89.19). The anaicut has a direct ayacut of 50.43 acres and a total ayacut of 321.07 acres.

Anaicut No.II

This anaicut is located just below the old Courtallam Falls and at the foot of the hills. This is a masonry anaicut from which a supply channel takes off at the right side through an open head. This channel feeds nine Minor Irrigation tanks and 4 P.W.D.tanks for a total indirect ayacut of 926.19 acres besides a direct ayacut of 95.61.The tanks are: Shenbagaramaperikulam (28.16), Uppinankulam (17.76), Sengulam (84.17), Pettaikulam (27.35), Nallamadanpudukulam (35.53), Arudankulam (PWD)(77.00), Pudukkulakm (PWD) 142.00), Sannathakjulam (PWD) 109.00, Narayanaperikulam (200.69), Thirupani Pudukulam (43.24), Avarandukulam (19.21), Kulasegaraperikulam (124.18), Vellaperikuvarkulam (17.90). The total area irrigated is 926.19 acres.

Anaicut No.III (Mathalamparai)

This is the third masonry anaicut across the river Aludakanniar. A channel takes off from the right side of the anaicut through a head sluice and channel feeds Mathalamparai minor irigation tank with an ayacut of 94.61 acres.

Anaicut No.IV

This is the fourth anaicut across Aluthakkanniar from which a channel takes off at the right side of the anaicut to feed Mavanerikulam a minor irrigation tank, which irrigates 199.20 acres.

Kandamangalam anaicut

This is the fifth anaicut across the river Aludakanniar. From this masonry anaicut, Kandamangalam channel takes off at the right side of the anaicut to irrigate a direct ayacut of 40 acres. This channel feeds Kandamangalam P.W.D. tank with an ayacut of 222 acres.

Anaicut No.VI.

This is the sixth anaicut across Aludakanniar from which a supply channel takes off from the left side to feed one minor irrigation tank and has a total ayacut of 165.30 acres.

Anaicut No.VII

This is the seventh anaicut across Aludakanniar with a supply channel at the right side of the anaicut which the Kadasvagathi a minor irrigation tank (with 51.64 acres of ayacut) in addition to its direct ayacut 71.62 acres.

Anaicut No.VIII

This is the last anaicut across Aludakanniyar which has just been constructed just above the Thenkasi-Thirunelveli road. A supply channel taking off from this anaicut feeds Vettaikarankulam, a minor irrigation tank, with an ayacut of 49.38 acres. It also irrigates a direct ayacut of 16.03 ac.

Maintenance and Water regulation in the Aludakanniyar river system

Except the Kandamangalam anaicut all the other anaicuts are incharge of Revenue Department. Therefore, the water regulation and maintenance automatically rest with the Revenue Department.

Ayacut of the Aludakanniyar river system

Sl.no.	*Name of anaicut*	*Ayacut* (acres)	
		Direct	*Indirect*
1.	Thalai anaicut	50.43	270.64
2.	Anaicut No.II	95.61	926.19
3.	Anaicut No.III	---	94.61
4.	Anaicut No.IV	---	199.20
5.	Kandamangalam anaicut	40.00	222.00
6.	Anaicut No.VI	4.96	160.34
7.	Anaicut No.VII	71.62	51.64
8.	Anaicut No.VIII	16.03	49.38
	Total	278.65	1974.00

Ayindaruviyar river system

Ayindaruviyar starts from the eastern slopes of the western ghats and the famous Ayindaruvi falls (Five falls) is the ornamental beauty of the river. This river joins the Chittar near Kasi Majorpuram village.There are two anaicuts across the river of which one is a P.W.D. source and the other is a minor irrigation source. The anaicuts are Ayindaruvi anaicut and Ilangi anaicut.

Ayindaruviyar anaicut

. This is the first anaicut across this river. The supply channel taking off from this anaicut irrigates a direct ayacut of 329.18 acres through nine minor irrigation tanks. They are Keela Vannankulam (5.90 acres), Keela Alan Melakulam (14.49 acres), Keela Vannanmadai (48.58), Mela Vannan madai (55.36), Tondankulam (20.23), Kallikulam (29.63), Therku Thamaraikulam (21.72), Therkku Thamaraipettaikulam (10.46) and Keela Thamaraipettaikulam (94.27).

Ilangi Anaicut

This is the second anaicut across Ayindaruviyar river. The Ilangi supply channel takes off from this anaicut at the left through a head sluice, and irrigates a direct ayacut of 115.94 acres through the one Ilangi tank. The anaicut, the channel and the tank are under the control of Public Works Department. The Ayindaruviyar anaicut has 629.82 acres ayacut and the Ilangi anaicut has 390.94 acres ayacut.

Jambunathi river system

The Jambunathi is a tributary to Ramanadhi river which originates in the eastern slopes of western ghats.

Subramania anaicut

This is the only anaicut across the river from which Kuthalaperi supply channel takes off at the left side through a head sluice. This channel irrigates a total direct ayacut of 149.84 acres and an indirect ayacut of 722.25 acres through five tanks. The anaicut and channels are under the control of the P.W.D. The five tanks with ayacuts in parentheses are Pudukulam , (142.00), Sennathakulam, P.W.D. (109.00), Narayanaperikulam PW.D. (200.69), Kuthalaperikulam (200.22), Sambankulam (70.34) and direct ayacut (149.84). These irrigate a total area of 872.9 acres.

Irrigation schemes such as Vadakku Pachayar reservoir near Manjuvilai, 6 km. from Kalakadu in Nanguneri taluk across the Vadakku Pachayar, Valamalayar reservoir near Puliangudi in Sivagiri taluk, Eluppaiyur reservoir in Ambasamudram taluk, Aluthakanniyar reservoir in

Ambasamudram taluk, Aluthakanniyar reservoir, Ullar reservoir in Sivagiri taluk and Elumichayar reservoir in Ambasamudram taluk are under investigation in the district.[25]

Ground water potential

The groundwater potential in Tirunelveli district has been assessed blockwise by the Groundwater wing of Public Works Department in January 1992 using water level fluctuation and specific yield method based on the norms stipulated by the Groundwater Estimation Committee set up by the Government of India in 1984. It is found that the utilisable annual groundwater recharge is 1006.13 MCM and the groundwater extraction is in the order of 543.50 MCM. Balance groundwater potential and the available water for further development in the district is 462.63 MCM. Blockwise groundwater potential and probable number of wells feasible in Tirunelveli district is furnished below.[26]

Annual groundwater recharge, groundwater extraction balance groundwater potential available

Sl. no.	*Blocks*	*Ground weter recharge (MCM)*	*Utilisable annual ground water recharge*	*Net ground water draft MCM for further development*	*Balance ground water potential available*	*probable number of wells feasible*
1.	Ambasamudram	23.70	20.14	4.35	15.79	855
2.	Alangulam	107.00	90.95	87.59	3.36	182
3.	Cheranmadevi	32.41	27.55	6.10	21.45	1162
4.	Kuruvikulam	102.18	86.85	60.92	25.93	1405
5.	Kilapavur	50.23	42.70	28.00	14.70	796
6.	Kadayanallur	56.96	48.42	26.09	22.33	1210
7.	Sankarankoil	67.78	57.61	40.18	17.43	944
8.	Shencottah	32.04	27.23	7.81	19.42	1052
9.	Vasudevanallur	132.86	112.93	72.51	40.42	2189
10.	Melaneelithanallur	52.84	44.91	39.05	5.86	317
11.	Tenkasi	51.96	44.17	2.39	41.78	2263
12.	Pappakudi	33.28	28.29	11.76	16.53	896
13.	Kadayam	44.72	38.01	19.85	18.16	983
14.	Manur	87.36	74.26	26.31	47.95	2597
15.	Palayamkottai	66.71	56.70	16.53	40.17	2176
16.	Nanguneri	88.02	74.82	18.29	56.53	3062
17.	Kalakkadu	45.74	38.88	20.90	17.98	974
18.	Radhapuram*	43.81	37.24	27.26	9.98	541
19	Valliyoor	64.09	54.47	27.61	26.86	1455

* Excluding saline areas.

The net area irrigated from 1990-91 to 1994-95 by surface water canals, tanks, and other sources of ground water such as public tube wells, private tube wells and dug wells are provided in the *Appendix - 8.*

APPENDIX - 1

Agricultural Engineering Department- Land Reclamation and Soil Conservation Works

Sl.no.	Name of the work	Objective of the schemes	Year of commencement	Area coverd (in ha.)	Physical achievement from inception to March '94	Financial achievement from inception to March '94 (Rs. in lakhs)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Soil Conservation Scheme						
1.	Contour bunding	To control soil erosion by run off	1962-63	54935.490	54935.490	154.820
2.	Contour bunding	water and to preserve moisture	1979-80	--	8220.935	16.414
3.	Pipe laying	For the economic utilisation of irrigation water	1980-81	27.680	27.680	1.857
4.	Vegetative contour Hedges	To control soil erosion by run off water.	1989-90	391.960	391.960	1.160
5.	Land levelling	To prevent soil erosion and to conserve soil moisture	1972-73	392.775	392.775	6.151
6.	Contour Stone wall	To control soil erosion in hills	1967-68	67.350	67.350	1.253
7.	Bench Terrace	--do--	1963-64	143.640	143.640	0.972
8.	Check wall	For gully control and to prevent	1988-89	---	77 Nos.	1.223
9.	Check dam	siltation in the irrigation tanks	1990-91	---	58 Nos.	3.042
10.	Waste weir	To arrest soil erosion by run off water	1988-89	---	135 Nos.	0.455
11.	Gully control	To prevent soil erosion in the	1985-86	84.570	84.570	0.240

APPENDIX - 1 (contd.)

(1)	(2)	(3)	(4)	(5)	(6)	(7)
12.	Mulching	To increase production	1987-88	0.810	0.810	0.049
13.	Farm pond	To give supplemental irrigation during drought	1988-89	---	4 Nos.	0.285
14.	Black cotton soil work	To increase production in black cotton soil areas	1984-85	42.930	42.930	0.265
2.	**Drought prone area programme**					
15.	Percolation ponds	To recharge the ground water	1988-89	---	18 Nos.	19.805
16.	Cattle pond	For watering the cattles in pasture lands	1988-89	---	20 Nos.	5.676
17.	Minor checkdams }	To prevent soil erosion in gullies and to	1989-90	---	51 Nos.	4.388
18	Major checkdams }	prevent siltation in irrigation tanks	1990-91	---	18 Nos.	10.678
19.	Community processing yard	For easy processing of Agriculture produces	1990-91		1 Nos.	0.370
3.	**Special schemes - JVVT**					
20.	Percolation ponds	To recharge the ground water	1980-81	---	463 Nos.	270.015
21.	Standardisation of panchayat union Minor Irrigation tanks	For desilting the tank and restoring the tank bunds in order to increase the capacity of irrigation tanks.	1992-93	---	8 Nos.	9.000
22.	Renovation of temple tanks	For better recharge of ground water in nearby wells	1993-94	---	9 Nos.	12.997

APPENDIX - 2

Land Utilisation from 1990-91 to 1995-96

(Area in Hec.)

	Classification	*1990-91*	*1991-92*	*1992-93*	*1993-94*	*1994-95*	*1995-96*
	1	*2*	*3*	*4*	*5*	*6*	*7*
1.	Forest	125508	122055	122055	122055	122055	N.A
2.	Barren and uncultivable land	25165	27191	27191	27191	27191	"
3.	Land put to non-agricultural uses	94814	96291	97921	99086	99307	"
4.	Cultivable waste	39901	79243	71131	72197	71832	"
5.	Permanent pastures and grassing land	10919	9851	9807	9807	9807	"
6.	Land under misc. tree crops	9231	8883	8400	9284	9487	"
7.	Current fallows	80385	14367	18526	18582	18149	"
8.	Other fallows land	129581	172669	158607	151845	151786	"
9.	Net area sown	166125	151758	168670	172261	172694	"
10.	Geographical area	681629	682308	682308	682308	682308	"
11.	Total cropped area	217718	201837	220731	218118	220527	"
12.	Area sown more than once	51593	50079	52061	45857	47833	"

APPENDIX- 3

Details of Paddy and other irrigational crops in Tirunelveli District

Sl.no.	Name of Crop	Area under Cultivation (in hectares)									
		1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94
1	2	3	4	5	6	7	8	9	10	11	12
1.	Paddy	99725	92497	59137	97189	75935	82744	101402	101001	105610	103066
2.	Cholam	12327	9676	4114	6392	6733	6866	5238	5398	3876	4918
3.	Cumbu	7465	4801	2246	2490	1461	1473	1229	2408	1372	1501
4.	Ragi	3506	2904	1760	1999	2303	1898	1467	1431	1272	1578
5.	Maize	92	403	262	45	77	45	145	105	642	568
6.	Minor millets	3624	2420	1137	3967	1231	616	1120	491	278	401
7.	Redgram	655	590	337	265	199	97	129	165	314	201
8.	Blackgram	262 16	18915	17210	26062	18011	20144	26816	22533	26046	27501
9.	Greengram	4687	2243	1749	1839	1895	2037	3307	2487	3295	4744
10.	Cowpea	3725	4509	823	1413	2020	1532	2114	2312	4224	3956
11.	Horsegram	2875	2620	1760	2328	1384	725	1394	897	3962	3337
12.	Bengalgram	127	10	10	9	1	1	2	15	2	12
13.	Cotton	26546	20356	11609	16399	21358	21576	20103	22984	20433	23853
14.	Sugarcane	2067	1826	813	1595	3535	3337	3351	3311	2166	3578
15.	Groundnut	9706	10760	4754	9993	10776	12446	11656	9827	12371	12649
16.	Gingelly	4868	5256	2469	2533	2894	3881	4525	3751	6222	5610
17.	Sunflower	1346	1489	614	221	405	389	362	144	255	568
18.	Soyabeans	..	..	..	..	..	..	..	..	377	1243
19.	Casior	..	..	..	72	201	435	379	164	157	184

APPENDIX- 4
Talukwise Cropping Pattern in the district

Sl.no.	Name of taluk	Wetland	Gardenland	Dryland
1.	Tirunelveli	i) Paddy - Paddy - Pulses ii) Paddy - Cotton iii) Paddy - Chilliesg14 iv) Paddy - Millet	Paddy - Cotton Paddy - Chillies Paddy - Groundnut Paddy - Millet	Pulses Gingelly Senna Fodder Cholam
2.	Palayamcottai	i) Paddy - Paddy - Pulses ii) Paddy - Cotton iii) Paddy - Chillies iv) Paddy - Millet	Paddy - Cotton Paddy - Chillies Paddy - Groundnut Paddy - Millet	Pulses Gingelly Senna Fodder Cholam
3.	Nanguneri	i) Paddy - Paddy - Pulses ii) Paddy - Cotton iii) Paddy - Groundnut iv) Paddy v) Paddy - Chillies vi) Banana	Paddy - Cotton Paddy - Chillies Paddy - Groundnut Banana	Pulses Gingelly Senna
4.	Radhapuram	i) Paddy - Paddy - Pulses ii) Paddy - Cotton iii) Paddy - Chillies iv) Banana v) Paddy - Millet vi) Paddy - Pulses vii)Paddy - Vegetables	Paddy - Chillies Paddy - Cotton Paddy - Groundnut Banana Vegetables Paddy - Tobacco	Pulses Groundnut Gingelly

APPENDIX- 4 (Contd.)

Sl.no.	*Name of taluk*	*Wetland*	*Gardenland*	*Dryland*
5.	Ambasamudram	i) Paddy - Paddy - Pulses ii) Paddy - Paddy - Gingelly iii) Paddy - Paddy iv) Banana v) Sugarcane vi) Paddy - Groundnut	Paddy - Cotton Paddy - Chillies Paddy - Groundnut Paddy - Vegetables	Pulses Millet Gingelly
6.	Tenkasi	i) Paddy - Paddy - Pulses ii) Paddy - Paddy - Soyabeans iii) Paddy - Cotton iv) Paddy - Chillies v) Banana vi) Sugarcane vii) Paddy - Millets	Paddy - Chillies Paddy - Cotton Paddy - Millets Paddy - Vegetables Sugarcane Banana	Sorghum - Pulses - Gingelly Groundnut - Pulses - Gingelly Pulses Sorghum
7.	Shencottai	i) Paddy - Paddy - Pulses ii) Paddy - Paddy iii) Paddy - Paddy - Soyabeans iv) Banana v) Sugarcane	Paddy - Millet Paddy - Cotton Paddy - Chillies Paddy - Vegetables Paddy - Soyabeans Paddy - Groundnut	Millet Sorghum - Pulses -gingelly Sorghum - Pulses Groundnut - Pulses Gingelly Soyabeans

APPENDIX - 4 (Contd.)

Talukwise Cropping Pattern in the District

Sl.no.	*Name of taluk*	*Wetland*	*Gardenland*	*Dryland*
8.	Sivagiri	i) Paddy - Pulses ii) Paddy - Cotton iii) Sugarcane iv) Paddy - Millet v) Banana	Paddy - Cotton Paddy - Chillies Paddy - Millets Paddy - Vegetables Sugarcane	Pulses Millets Cotton Gingelly Sunflower
9.	Sankarankoil	i) Paddy - Cotton ii) Paddy - Chillies iii) Paddy - Vegetables iv) Sugarcane	Paddy - Cotton Paddy - Millet Sorghum Paddy - Groundnut	Millet Pulses Cotton Sunflower Gingelly Senna

APPENDIX - 4 (Contd)

Talukwise area sown to total area (in %)

Sl.no.	*Name of the taluk*	*1990-91*	*1991-92*	*1992-93*	*1993-94*	*1994-95*
1.	Tirunelveli	75.3	63.3	62.6	65.5	66.6
2.	Palayamkottai	49.9	53.0	60.8	62.8	64.7
3.	Sankarankoil	98.5	99.0	97.5	97.9	98.3
4.	Tenkasi	65.0	67.2	67.2	71.6	70.3
5.	Shencotta	57.6	63.1	62.5	61.6	61.8
6.	Sivagiri	90.8	85.2	81.7	87.0	85.6
7.	Ambasamudram	58.9	64.2	63.5	65.7	62.4
8.	Nanguneri	89.2	85.7	89.2	87.4	88.8
9.	Radhapuram	95.0	85.8	89.6	93.5	92.4
	Districrt total	**76.3**	**75.2**	**76.4**	**79.0**	**78.3**

APPENDIX - 4 (Contd.)

Talukwise net area sown to total area

(Area in Ha.)

Sl. no.	Name of the taluk	Net Area Sown					Total Area				
		1990-91	1991-92	1992-93	1993-94	1994-95	1990-91	1991-92	1992-93	1993-94	1994-95
1.	Tirunelveli	10322	10286	10454	10280	11005	13699	16237	16710	15687	16534
2.	Palayamkottai	6268	5153	6057	6044	6030	12561	9730	9960	9622	9327
3.	Sankarankoil	42426	32609	43266	42310	43925	43056	32942	44353	43207	44667
4.	Tenkasi	30889	31765	33807	34185	32208	47500	47238	50302	47746	45832
5.	Shencotta	7010	7365	7560	7199	7151	12165	11671	12098	11693	11562
6.	Sivagiri	20543	14753	16253	17575	18602	22626	17315	19887	20207	21740
7.	Ambasamudram	21391	21968	22079	22448	22964	36319	34201	34771	34192	36806
8.	Nanguneri	15654	15796	16384	17529	16669	17552	18436	18360	20056	18763
9.	Radhapuram	11622	12063	12810	14691	14140	12240	14067	14290	15707	15296
	Tortal	166125	151758	168670	172261	172694	217718	201837	220731	218118	220527

APPENDIX - 4 (Contd.)

Talukwise area sown more than once

Sl.no.	*Name of the taluk*	*1990-91*	*1991-92*	*1992-93*	*1993-94*	*1994-95*
1.	Tirunelveli	3377	5951	6256	5407	5529
2.	Palayamkottai	6293	4577	3903	3578	3297
3.	Sankarankoil	630	333	1087	898	742
4.	Tenkasi	16611	15473	16495	13561	13624
5.	Sengottai	5155	4306	4538	4494	4411
6.	Sivagiri	2083	2562	3634	2632	3138
7.	Ambasamudram	14928	12233	12692	11744	13842
8.	Nanguneri	1898	2640	1976	2527	2094
9.	Radhapuram	618	2004	1480	1016	1156
	Total	51593	50079	52061	45857	47833

APPENDIX - 4 (contd.)

Talukwise area sown to total area (in %)

Sl.no.	*Name of the taluk*	*1990-91*	*1991-92*	*1992-93*	*1993-94*	*1994-95*
1.	Tirunelveli	75.3	63.3	62.6	65.5	66.6
2.	Palayamkottai	49.9	53.0	60.8	62.8	64.7
3.	Sankarankoil	98.5	99.0	97.5	97.9	98.3
4.	Tenkasi	65.0	67.2	67.2	71.6	70.3
5.	Shencotta	57.6	63.1	62.5	61.6	61.8
6.	Sivagiri	90.8	85.2	81.7	87.0	85.6
7.	Ambasamudram	58.9	64.2	63.5	65.7	62.4
8.	Nanguneri	89.2	85.7	89.2	87.4	88.8
9.	Radhapuram	95.0	85.8	89.6	93.5	92.4
	District total	76.3	75.2	76.4	79.0	78.3

APPENDIX - 4 (contd.)

Talukwise area sown to total area (in %)

Sl.no.	*Name of the taluk*	*1990-91*	*1991-92*	*1992-93*	*1993-94*	*1994-95*
1.	Tirunelveli	75.3	63.3	62.6	65.5	66.6
2.	Palayamkottai	49.9	53.0	60.8	62.8	64.7
3.	Sankarankoil	98.5	99.0	97.5	97.9	98.3
4.	Tenkasi	65.0	67.2	67.2	71.6	70.3
5.	Shencotta	57.6	63.1	62.5	61.6	61.8
6.	Sivagiri	90.8	85.2	81.7	87.0	85.6
7.	Ambasamudram	58.9	64.2	63.5	65.7	62.4
8.	Nanguneri	89.2	85.7	89.2	87.4	88.8
9.	Radhapuram	95.0	85.8	89.6	93.5	92.4
	Districrt total	76.3	75.2	76.4	79.0	78.3

APPENDIX - 5

Paddy strains released from Paddy Experiment Station, Ambasamudram

Strain no.	Popular name	Percentage	Year of release	Season	Grain Yield (t/ha)	Total duration (days)	Rice Grade	Remarks
1	2	3	4	5	6	7	8	9
ASD 1	Kar samba (red)	Pureline	1943	Kar	4.5	115	SB : Red	Ruling strain in Kar of Tirunelveli
ASD 2	Kar samba (white)	Pureline	1944	Kar	4.0	110	SB : White	---
ASD 3	Veedhidangah	Pureline	1944	Pishanam	3.0	135	SB : Red	Drought resistant
ASD 4	Kuruvakalayan	Pureline	1945	Pishanam	3.5	135	LB : Red	---
ASD 5	Karthigai samba	Pureline	1945	Pishanam	4.0	150	MS : White	Suitable for late planting (Nov.) and for tankfed areas.
ASD 6	Anaikomban	Pureline	1945	Pishanam	3.0	160	MS : White	Non-shedding
ASD 7	Kar samba (red) - early	Pureline	1945	Kar	3.0	105	SB : Red	---
ASD 8	Thuyamalli	Pureline	1951	Kar	3.0	86	SB : Red	Very early, suitable for Kar nursery area and summer.
ASD 9	Avasara samba	Pureline	1951	Kar	3.0	92	SB : Red	--
ASD10	Kolavalai	Pureline	1952	Pishanam	2.5	170	SB : White	Withstands water stagnation.
ASD11	Ottu kichili	Natural crops GEB 24 / PTB 15	1955	Pishanam	4.5	150	MS : White	Suitable for late planting
ASD12	Ottu Anaikomban	" "	1964	Pishanam	4.5	165	MS : White	--
ASD13	Arikiravai	Pureline	1965	Pishanam	4.0	170	LB : Red	--
ASD14	Pennai	T(N).1/ASD1	1970	Kar	4.8	110-115	MS : Red	Semi dwaff with ideal plant type

APPENDIX - 5 (contd.)

1	2	3	4	5	6	7	8	9
ASD15	---	IR26/IR22	1979	Pishanam	4.6	115-125	MS : White	Semi dwaff with super-fine rice
ASD16	---	ADT 31/CO 39	1986	Kar & late Pishanam	5.6	110-115	SB : White	Semi dwaff, high protein Moderate resistance to Sh.B & BPH.
ASD17	---	ADT 31/Ratna/ ASDB/IRS	1989	" "	5.4	100	SB : Red	Semi dwaff, suitable for tail - end areas and direct seeding
ASD18	TIN 200	AST 31/IR 50	1991	Kar, late Pishanam and & summer	7.3	105-110	MS : White	Semi dwaff, early duration, high head - rice recovery. Resistance to BPH, WBPH and Blast, Mode, resistant to Sh.B,RTV. GM & LF.
ASD 19	---	Lalnakanda/IR 30	1995	Pishanam	5.8	120-132	SS : White	Moderately resistant to blast and tolerant to early drought ; efficient user of soil N.optimum being 100 kg. ha; suitable for October sowings in place of IR 30 and ADT 39.

Kar : May - June Sowings Pishanam September - October. Sowing Late pishanam : November sowings
SB - Short Bold LB : Long Bold MS : Medium Slender SS : Short Slender

APPENDIX - 6

Manimuthar - Lake Type

Year	*stocking*	*Fish landed* (tonnes)	*Revenue* (Rs.)
1965-66	3,61,000	9.721	–
1966-67	1,66,000	5.370	4,131-00
1967-68	1,69,000	4.033	2,028-00
1968-69	4,11,000	4.033	2,028-00
1969-70	4,00,000	7.615	5.242-00
1970-71	3.00,000	5.201	5.026.00
1971-72	1.89,000	3.267	3.645
1972-73	3.04,000	4.954	4.837.00\
1973-74	3,45.000	5.807	8.666.00
1974-75	10,000	7.835	13,739.00
1975-76	4.22.000	5.853	10,912.00
1976-77	5.04,000	4.465	–
1977-78	6.02.000	6.712	–
1978-79	3,00,000	6.341	–
1979-80	3,00,000	4.044	–
1980-81	3,00,000	12.060	–
1981-82	2,00,000	8.522	–
1982-83	2,29,000	6.061	–
1983-84	4,50,000	4.018	–
1984-85	7,.75,000	2.711	–
1985-86	10,20,000	5.100	20,687-00
1986-87	7.60,000	10.800	52,128.00
1987-88	8.20,000	12.033	44,849-00
1988-89	5,00,000	5.060	17,908-00
1989-90	5,00,000	6.598	30,167.00
1990-91	5,00,000	5.518	26,000,00
1991-92	5,00,000	1.750	10,227.00
1992-93	5,00,000	4.431	1,153.00
1993-94	1,25,000	10.066	85,095.00
1994-95	2.00,000	3.442	35,021.00
1995-96	2,00,000	7.612	1,13,054.00
1996-97	2,25,000	9.003	1,20,332.00

APPENDIX- 6 (contd.)

Gadana - River Type

Year	stocking	Fish landed (tonnes)	Revenue (Rs.)
1978-79	80,000	19.351	--
1979-80	"	"	--
1980-81	1,00,000	1.330	--
1981-82	1,00,000	0.85	--
1982-83	46,000	1.598	–
1983-84	55,0000.	019	–
1984-85	1,00,000	.019	–
1985-86	1,00,000	1.090	2,803.00
1986-87	1,00,000	0.980	2,729-00
1987-88	1,00,000	1.520	3,819-00
1988-89	40,000	3.260	10,202-00
1989-90	75,000	3.760	7,022-00
1990-91	40,000	2.808	11,000.00
1991-92	40,000	2.530	11,372.00
1992-93	40,000	0.765	6,890-00
1993-94	10,000	0.763	829.00
1994-95	30,000	0.452	8,00,637.00
1995-96	30,000	2.521	35,129.00
1996-97	40,000	1.891	20,765.00

Ramanathi

Year	Stocking	Fish landed (tonnes)	Revenue (Rs.)
1986-87	1,50,000	1.240	3,516.00
1987-88	1,00,000	2.512	6,429.00
1988-89	40,000	8.890	38,936.00
1989-90	70,000	1.400	8.490-00
1990-91	45,000	1.677	7,000-00
1991-92	40,000	0.580	2,107.00
1993-94	10,000	0.260	2,775.00
1994-95	37,000	0.339	3,528.00
1995-96	37,000	3.004	30,857.00
1996-97	37,000	0.271	2,650.00

APPENDIX - 6 (contd)

Karuppanathi - Lake Type

Year	*Stocking*	*Fish landed* (tonnes)	*Revenue* (Rs.)
1984-85	50,000	2.275	–
1985-86	77,000	4.240	23,848.00
1986-87	1,50,000	1.510	8.684.00
1987-88	1,50,000	3,023	14,601-00
1988-89	1,00,000	7.330	31,195.00
1989-90	1,05,000	4.000	8.490.00
1990-91	1,00,000	4.814	19,000-00
1991-92	1,00,000	3.080	8.941.00
1992-93	1,00,000	1.844	12,381.00
1993-94	30,000	2.805	16,743.00
1994-95	28,000	0.262	4,185.00
1995-96	25,000	4.169	48,860.00
1996-97	40,000	3.199	37,189.00

Gundar

Year	*Stocking*	*Fish landed* (tonnes)	*Revenue* (Rs.)
1986-87	40,000	0.960	---
1987-88	50,000	1.022	3.050-00
1988-89	20,000	3.000	8.917.00
1989-90	39,000	0.940	2,318-00
1990-91	20,000	2.201	9,000-00
1991-92	40,000	3.000	16.194.00
1992-93	40,000	0.668	5.591.00
1993-94	10,000	2.003	11,100.00
1994-95	7,000	3.022	15,690.00
1995-96	5,000	2.518	15,825.00
1996-97	14,000	2.731	31,151.00

APPENDIX- 7

Particulars of damages to houses and expenditure incurred due to heavy rain during the months of November and December 1993

S.no.	Taluk	No. of houses fully damaged	Amount paid (Rs.)	No.of houses partly damaged	Amount paid (Rs.)	Total no. of houses damaged	Total amount paid (Rs.)
1.	2.	3.	4.	5.	6.	7.	8.
1.	Tirunelveli	794	3,97,000	971	2,42,750	1,765	6,39,750
2.	Palayamkottai	358	1,79,000	748	1,87,000	1,106	3,66,000
3.	Sankarankoil	78	39,000	86	21,500	164	60,500
4.	Tenkasi	17	8,500	56	14,000	73	22,500
5.	Veerakeralampudur	28	14,000	21	5,250	49	19,250
6.	Sivagiri	96	48,000	243	60,750	339	1,08,750
7.	Nanguneri	69	34,500	237	59,250	306	93,750
8.	Radhapuram	41	20,500	157	39,250	198	59,750
9.	Ambasamudram	81	40,500	119	29,750	200	70,250
10.	Shencottai	17	8,500	31	7,750	48	16,250
	Total	**1,579**	**7,89,500**	**2,669**	**6,67,250**	**4,248**	**14,56,750**

APPENDIX - 8.

Irrigation Particulars

(Net area irrigated in Hect.)

	Item	*1990-91*	*1991-92*	*1992-93*	*1993-94*	*1994-95*
1.	Surface water canals:					
	i. Government canals	31,513	18,254	17,622	18,243	18,704
	ii. Private canals	–	–	–	–	–
2.	Tanks :					
	i. Large	73,542	43,528	53,166	57,276	29,992
	ii. Small	–	–	–	–	20,312
3.	Other sources ground water:	–	–	150	–	–
	ii. Private tube wells	–	–	–	–	82
	iii. Dug wells	45,156	52,667	50,865	45,730	47,401

Notes and References

1. Report dated 16 March 1998 from the Joint Director of Agriculture (Research) Soil Survey and Land Use Organisation, Coimbatore district.
2. Report dated 3, June 1998 from the Chief Engineer (Agricultural Engineering) Chennai.
3. Report dated 24 June 1998 from the Director of Agriculture, Chennai.
4. Report dated 9, June 1994 from the Joint Director of Agriculture,Tirunelveli.
5. Booklet on Horticultural crops issued by the Directorate of Horticulture, Chennai.
6. Report dated 23, February 1996 from the Executive Director, The Bombay BurmahTrading Corporation Ltd., Mudis, Coimbatore.
7. Report dated 18, June 1998 Director of Seed Certification, Coimbatore.
8. Madras Information, February 1954, p.n.
9. Report dated 10, September 1998 from the Regional Joint Director of Animal Husbandry, Tirunelveli.
10. Report dated 14, December 1993 from the Managing Director, The Tirunelveli District Cooperative Milk Producers' Union Ltd.
11. *Tamil Arasu*, May 1997, p.30
12. Report dated 29, June 1998 from the Director of Fisheries, Chennai.
13. Report dated 19, August 1998 from the District Forest Officer, Tirunelveli Division,Tirunelveli.
14. Report dated 30, July 1993 from the Assistant Director of Agriculture (Marketing), Tirunelveli.
15. Report dated 17, February 1994 from the Executive Engineer, Tamil Nadu Agro Industries Corporation Ltd.
16. H.R.Pate, *Op cit.*, pp.247 - 253
17. Report dated 17, November 1993 from the Collector of Tirunelveli.

18. Madras Information, June 1954, p.8

19. Madras Information, September 1955, p.11

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21. *The Hindu,* dated November 19, 1998, p.5

22. H.R.Pate, *Op cit.,* p.78

23. *Dinamalar Daily,* Nellai Edition, dated 13, February 1996, p.5.

24. Irrigation Reservoirs in Tamil Nadu, published by the Tamil Nadu Irrigation Management Training Institute, Tiruchirappalli.

25. Report dated 12, November 1994 from the Chief Engineer, PWD (Planning and Designs), Chennai.

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CHAPTER- 5

INDUSTRIES

Old Time Industries

The economy of the district had acquired a pre- industrial status even during ancient period. Besides agricultural products, pottery, smithy, carpentry, construction activity, and wood carving were the every day occupation for the artisans who were by birth, more or less bound to pursue there avocations. Weaving, especially of cotton cloth, was another old time industry. Potters, goldsmiths, oil-mongers, weavers etc., were all subject to profession tax, unless exempted even which would a test the diversification of industry[1]. Other industries in the district are safety matches, bell metal and brass vessels, lacquer ware, bullock cart manufacturing, basket making, korai mat weaving etc. The noteworthy feature of the district was concentration of certain type of industries in a particular area like bell metal industry in Vagaikulam, Korai mat weaving units in Pathamadai and Veeravanallur, lacquer ware in Ambasamudram, safety matches in Sankarankoil, palmyra products manufacture in Nanguneri and Radhapuram taluks, bricks units in Ambasamudram and Tenkasi taluks, cane furniture and saw mills in Shencottai and Tenkasi taluks. Some of the old time industries vanished due to severe competition from the mechanised industries and change of techniques in manufacturing and development of research in industrial designs and technologies. Poor patronage also led to fall in demand which finally led to decline of these industries. The ordinary artisans, the carpenters, the goldsmiths, the blacksmiths and the potter existed in most villages and their work which was much the same as elsewhere in other districts.

Scientific development and technological advancement have brought innovation, invention and improvement in the consumer durables. This trend had brought a change in the attitude on consumers who played a vital role causing the decay of certain industries like bell metals, brass articles, bullock carts etc. Another reason for the decay of certain industries was the low percentage of profit margin. This resulted in the decline of certain industries like basket making, manufacturing of agricultural implements with primitive technology and so on.

Cotton Weaving

The weaving of cotton cloths was the hereditary employment of the Kaikkilaiyars, Pattasalaiyars and Pattunulkarars and formed the chief occupation of a large number of Muslims and some of the other people . Wide streets lined with double rows of trees to give shade to the workers at the long line of outstretched warp were the familiar signs of a settlement of weavers. The main centres were Ambasamudram, Kallidaikurichi,

Viravanallur, Pattamadai, Pottalpudur and many neighbouring villages in Ambasamudram taluk. The other chief centres were Tenkasi, Kadaiyanallur, Tirunelveli, Palayamcottai, Melapalayam and Eruvadi (Nanguneri taluk).

In the time of the Dutch, weaving was an important industry. The Dutch had weavers bound by contract to work for them in various centres. It was only in a few centres, where the existence of a class of capitalists rendered possible a combination of workers and a fairly large and continuous output of woven fabrics, that weaving was a profitable industry. In all the important weaving centres of the Ambasamudram taluk, the rich Brahmins of Kallidaikurichi had their *taragars* or brokers. They advanced money to the local weavers and bought the finished products from them, at a price which made allowance for the sum advanced plus interest and left a margin both for the brokers commission and the seller's profit. In Kallidaikurichi and Cheranmahadevi these Brahmins had set up cottage units on a small scale. In Eruvadi in Nanguneri taluk, Tenkasi and Kadaiyanallur, Muslim weavers were under the control of Muslim capitalists of Melapalayam, and considerable profit accrued to the employers from an extensive export of trade to Sri Lanka and Singapore. The cotton clothes woven carried greatly in quality. They were produced in the large numbers, by all classes of weavers,and were rough cloth, known as Muri. They were used either as a sort of towel or upper cloth or as both. Large quantities of these cloths were sent to Travancore from all parts of the district and the bulk of the Kallidaikurichi trade consisted in the manufacture and export of this article. The cotton cloths worn by women were made by every class of weaver in all parts of the district.A superior kind of cloth for the use of men was made from cotton of the higher counts by the Pattasalaiyars of Cheranmahadevi, Veeravanallur and Kallidaikurichi. The Pattunulkarars also produced a similar material in a few centres. Like the muris, these garments, known as mundus, were sent to the west coast. The clothes were usually ornamented with borders of silk and lace. The plain or check, known usually as the "Singapore cloth" was the manufacture of Muslim weavers, and was produced in large quantities in Melappalayam, Eruvadi, Madayanallur and Tenkasi.The clothes were brought up by merchants of Pettai and were either sold in the district or exported from Thoothukkudi to Sri Lanka and the Straits settlements. For all the ordinary clothes the yarn used was that produced by the mills of the district.[2] Only for the finer kinds of mundu and selai (women's cloth) foreign thread was obtained in the Madurai market.

Silk Weaving and Looms

Clothes of pure silk were not woven in the district. The Pattasalaiyars and Pattunulkarar made clothes for women out of a mixture of silk and cotton.The looms used for weaving of all kinds were mostly of old indigenous pattern. Fly shuttles were rarely used in the looms in the important centres

of the Ambasamudram taluk since they damaged the warp. One or two machine looms, in which the whole business was done by treadles were to be found in Ambasamudram taluk.

Lace Thread

Lace thread was made by a few Muslims at Veeravanallur. Gold and silver wires were beaten out in flat strips on an anvil and then twisted round cotton threads. For the manufacture of gold lace the thread should first be dyed red. The silver wires after they had been hammered out, were usually subjected to a process, which for a time at least gave them the appearance of gold. A perforated pot was placed bottom upwards over a mixture of smoking straw and saffron, and the wires were laid across the top. The colouring so obtained, though not lasting, was generally considered to enhance the value of mere silver wire. The lace is used for borders and for the Chutti the longitudinal Vshaped mark which most purchasers, and above all the Malayalis, look for in the corner of their cloths.[3] This industry was found in Ambasamudram, Tenkasi and Melapalayam areas. Dyeing was mostly blue and red and blue dyes were obtained from the Indigo plants. Dyeing industry is almost extinct in the district. Its gradual disappearance is due to the increased importation of dyed yarns from Madurai.

Mat making

Palmyra mat weaving: Mats of varying degrees of coarseness are made from the leaves of the palmyra in almost all parts of the district where that tree is plentiful. The manufacture of palmyra articles forms a regular employment for the womenfolk of the tapper families during the off-season.

Grass mat weaving: Mats of korai grass are made mostly by Muslims in Pattamadai, Alwarkurichi, Veeravanallur, Harikesavanallur and Kalakkadu. For ordinary mats, Korai is obtained from the beds of tanks and channels in the district, after getting the permission from the Government. It is dyed to a variety of colours and woven by hand on to a warp, which is usually made of aloe fibre. The finished articles are sent in large quantities to Pettai, where they are distributed within the district and other parts of the State and Country. A mat of very superior composition and considerable reputation is produced at Pattamadai. Its manufacture has been the monopoly of some Muslim families even to-day.

Basket making

The Palmyra grows in abundance in Nanguneri and Radhapuram taluks, flourishing chiefly in the sandy tracts. Its tender leaves,are worked up into fine baskets, an industry commonly pursued by women in the villages in the south of the Nanguneri taluk. The tender leaves are cut into strips and dried in the sun and are then often dyed to a variety of colours. Fancy

articles, such as models of processional cars and animals, are also made. When the leaves are more mature, they are cut and plaited to form mats and baskets.They are twisted to serve as water buckets. Fully matured leaves are used for thatching purposes and is invariably used by the poor people as complete shelter. The stem of the leaf is a most valuable item. The fibre when beaten out is twisted into yarn and ropes; and from Thisaiyanvilai the most important centre of this industry, large quantities of fibre are produced and exported to Europe for use in the manufacture of ropes and brushes with fibre obtained from the stem. In many villages in the south of Nanguneri,Nadar and Muslim women make nice fancy baskets, suitable for betel and tobacco boxes, out of tender palmyra leaves, which they dye in a variety of colours.

Tirunelveli District Palm Products Cooperative Federation Limited

The Tirunelveli District Palm Products Cooperative Federation with its headquarters at Thoothukkudi has jurisdiction over Tirunelveli and Thoothukkudi districts. It is functioning from 19 December 1934 with the object of developing primary palm jaggery cooperative societies affiliated to district federation. It lends loans to the members of the primary societies and assists members in the production of palm jaggery. It encourages the production of palmyra articles, coir manufacture and imparts training facilities to the members. It renders assistance to the members in storing their finished products and helps to sell them at higher prices and it strives for the rehabilitation of the members and solves the problems faced by them. The Federation has about 39000 members and has 210 palm jaggery coop.societies with a share capital of Rs.6.43 lakhs in the district. There are about 40 lakh palmyra trees in the district of which about 10 lakh palm trees are used for palm jaggery manufacture. The palmyra industry season is between January and September. There are 107 societies with 35000 members functioning out of 220 societies and the total production of finished products of the societies comes to Rs.4 crores per annum. The daily earning of the member is between Rs.30 and Rs.50.

The District Federation has branches at Puliankudi, Valliyoor, Thisayanvilai and sales centre is at Palayamkottai. The Federation is under the control of the Assistant Director of Khadi and Village Industries and it bagged awards for best performance since 1933. The Federation has building properties at Puliankudi, Palayamkottai, Valliyoor and Thisayanvilai and land properties to the extent of 74 acres at Sreeraghunathapuram, 22 acres at Kulavanikapuram, 86 acres at Kottai Karunkulam and one acre at Pavoor chatram. The District Federation receives financial assistance from the All India Khadi and Village Industries, Tamil Nadu Palm Products Development Board, State Palm Jaggery Cooperative Federation etc., and it provides financial assistance to the members to improve their industries. Confectionaries such as ginger jaggery, coconut jaggery,

greengram jaggery, cardamam jaggery, cashew jaggery etc., are prepared from the palm juice. Further, in the palmyra tree, all parts are useful to the people. Products such as palm juice known as neera, palmyra roots are used as food.

Sugar factories

The Pettai Sugar Mill Company Ltd., founded by a family of Muslims, started a sugar factory in the year 1895 at Tirunelveli. Due to financial crisis, the factory was closed in the year 1910. Afterwards the mill was put into the possession of a chettiar who started the work in late 1913. The Sarangapani Sugar Mill Company Ltd., which opened a factory in Tirunelveli in 1898 had to close it in 1902 owing to financial problems.

Oil Mills

Gingelly oil was main product produced in the district. It was extracted by Vaniyans in the ordinary country mill (chekku), the gingelly was being obtained locally. But, now, modern techniques are used to extract the oil. Pettai is a great collecting centre for this article. The oil is used primarily for the purposes of cooking and secondarily for bathing.

Strings and Ropes

String of some sort or other is perhaps the easiest thing to obtain at a moment's notice in any part of the district. Agriculturists generally make the string required for everyday uses - tying up their cattle, strapping up bundles and binding broken palmyra fibre depending upon the availability in the locality.

Baskets

Throughout the palmyra country baskets are made out of palmyra leaves. Some are made out of the mid-ribs of palmyra leaves; others consist of leaves only or a combinaton of leaves with fibre obtained from the stem. In many villages in the South of Nanguneri, Shanar and Muslim women make nice fancy baskets, suitable for betel and tobacco boxes, out of tender palmyra leaves, which they dye in a variety of colours.

Bell-metal Industry

Bell metal vessels are made in various parts of the district. The industry is mainly found in places like Vagaikulam and Mannarkoil in Ambasamudram taluk, Tirunelveli and Narasinganallur in Tirunelveli taluk and Sankarankoil. The products of Vagaikulam, which include lamps, temple-bells, and the usual vessels of domestic use, are the best known, and the demand for them is brisk. An earthenware core is first coated with clay and then with wax. The wax is carefully shaped to the required design, and over it are laid further coatings of clay. As soon as the covering has

hardened the whole thing is placed on the fire, and, as the wax melts and runs away through an aperture provided in the clay case for the purpose, the molten alloy is poured into the hollow space and assumes the shape desired. In 12 hours the metal hardens; the clay is broken, and after a little polishing the vessel is ready.

Brass-works

Brass vessels are made out of plates of metal, which are heated and beaten out on the anvil; sections are welded to-gether and reduced to their final shape by a process of gentle hammering. The plates are imported. Hindu idols are produced at Vagaikulam; elsewhere the productions are chiefly domestic vessels.

Iron smelting

Iron was found along the foot of the ghats at Vasudevanallur and Kadaiyanallur. The ore used for iron-melting was the black metallic sand to be found in the local watercourses. It is said that a European who came to the region and saw the process of iron-smelting went home and passed on the secret to his own people; thus the import of cheap iron began, and the indigenous industry gradually faded away. Jewellery and ornaments were produced by the Tattasari in all parts of the district.

Tanning

About half a dozen tanneries existed in the district. The bark of the avaram plant could be obtained in large quantities in almost all parts of the district, and the process of tanning was much the same as elsewhere. Leather of a good quality was exported to Europe and most of the leather products were sold locally. The slippers made in Tirunelveli were popular both within the district and beyond it for their finishing and durability. Shoemakers were brought by the Dutch from here to their Settlements on the west coast in the 18th Century.

Printing Presses

Printing was an old time industry and about 25 printing presses were functioning in the district in the later part of 1880 and in early 1890. 15 of which were distributed over the three municipal towns. They were mostly engaged in printing leaflets, notices, official and demi-official records.

Industrial School

The first public industrial school in the district was opened in 1887 by the Tirunelveli municipality. It was located at the Pennington market and was intended to afford instruction in carpentry, blacksmith's work, and ratton work. It attracted very small attendance and hence it was closed in 1891.[4]

In spite of its being mainly agriculture based , the district provides a congenial climate for industrial development with resources, infrastructure facilities available in it. The district has good deposits of limestone. The Government of Tamilnadu have provided various concessions and incentives for the promotion of industries in the district. The district had a total number of 22 large and medium scale industries during 1994-95 of which 19 units were under private sector, two under cooperative sector and one under corporate sector. The fixed investment on these industries comes to nearly Rs.250 crore providing employment to about 19000 persons. Textile mills are located in Sankarnagar, Pettai, Shencottai, Papanasam, Nanguneri areas. There exists one paper mill at Vadakku Ariyanayagipuram near Cheranmahadevi. Two units providing non-metallic mineral products are located in Sankar Nagar. One roller flour mill at Gangaikondan and one modern rice mill at Sankar Nagar are functioning in the district. Under the category of small scale units, agro based units constitute first followed by chemical and mechanised industries. Small scale units are located throughout the district. Most of the finished products of these units are marketed within the district as well as in the neighbouring districts. A few products on food industries are exported to foreign countries. Handicraft units such as palm leaf articles, korai mat, pottery, bamboo, cane, straw bangles and beads, wood work, stone work and jewellery ivory, are functioning . The cottage industries include bee-keeping, artificial flowers making, cane furniture, wood turning industry, tailoring, etc[5].Tenkasi and Radhapuram are industrially the most backward taluks and Shencottai, Sankarankoil, Nanguneri and Palayamcottai taluks are industrially backward taluks. State capital subsidy ranging from 20 to 15 per cent on fixed investment were available to start new industries in the most backward and backward taluks respectively.

Beedi rolling, safety matches making, mat weaving and processing and manufacturing of palm fibres and articles from palm trees and weaving of handloom textiles are the main household industries and are concentrated in Tenkasi, Ambasamudram and Tirunelveli towns. Safety matches are made mainly in Sankarankoil and Sivagiri taluks. Handloom weaving, beedi rolling and net weaving are prominent in Ambasamudram taluk where plenty of palmyra trees grown are famous for the manufacture of articles from palm leaves.[6]

Cement, cotton yarn and textiles are the main items produced by the large scale industries. M/s.India Cements Ltd., has two cement plants at Sankar Nagar and Talayuthu.

There were thirteen textile mills engaged in the production of yarn. The first spinning mill under cooperative sector was established in the district in 1958 at Pettai near Tirunelveli. Most of the other textile mills are situated in Ambasamudram, Tirunelveli and Nanguneri taluks. Paper,

paperpulp, newsprint quality paper etc., are manufactured by M/s.Sun Paper Mills Ltd, at Ariyanayagipuram.

Fire bricks are manufactured by M/s Dalmia Ceramic industries at Tirunelveli. There were 978 rice mills for hulling of paddy. Further, some other industries are manufacturing automobile parts and infrastructural parts for textile industries.

Cottage Industries

Some of the important cottage industries are tailoring, palmyra leaf fancy utility articles manufacturing units, Korai mats, date leaf baskets, handbags, window screen manufacturing units, cotton wool textiles units, appalam manufacturing units, basket (Ethel-Kambu), brass, copper vessels making units, pottery units, etc. Other cottage industries are laundry units, leather goods making, ornamental and jewellery units, wood work units, silk thread, cotton thread winding units, beads making units, plastic wire knitting units, pickles and mixture making units, country brick making units, etc. In 1992, there were 2409 cottage industries units in the district. Productwise cottage industries units are tabled below:

Sl.no.	*Item of manufacture*	*Total*
1.	Appalam	158
2.	Bee keeping	7
3.	Confectionery	11
4.	Artificial flowers	6
5.	Aloe Fibre extraction Palm yarn and coconut fibre	10
6.	Laundry	64
7.	Leather goods making	45
8.	Ornamental and jewellery	63
9.	Ornamental leather crafts	6
10.	Weaving cotton wool textiles	197
11.	Tailoring	329
12.	Cane furniture	11
13.	Agar bathis making	11
14.	Korai mats, dates baskets, hand bags, window screens	269
15.	Palmyra leaf-fancy utility articles	276

Sl.no.	Item of manufacture	Total
16.	Palmyra rafters, stoma, furniture cots, etc.	10
17.	Wood Turning Industry, other wood works	89
18.	Winding of silk, thread, cotton thread and artificial yarn	57
19.	Coconut leaf	69
20.	Beads	45
21.	Plastic Wire knittings to furniture	52
22.	Pickles and mixture making	34
23.	Puffed Rice	19
24.	Basket (Eathel-kambu	147
25.	Brass, Copper Vessels	131
26.	Country Bricks	65
27.	Pottery	129
28.	Blacksmithy	23
29.	Wet Grain Pounding	19
30.	Photo framing	6
31.	Silk cotton pillow and mattress	1
32.	Handmade snacks	12
33.	Others	24

Rice Mills

Tirunelveli district is mainly an agricultural district. Paddy is cultivated in the Tamiraparani and other river basins and rice mills have been spread widely in all the Panchayat Unions. Cheranmahadevi Panchayat union had 46 rice mills, followed by Vasudevanallur which had 43 rice mills. There were 42 mills in Kalakadu, 41 in Nanguneri and 33 in Kadayam Panchayat unions. Pappakudi had 32 rice mills. Keelapavur and Nanguneri Panchayat unions had 30 rice mills each.

There were 27 rice mills each in Palayamcottai, Manur and Valliyur Panchayat unions, 20 in Radhapuram, 18 in Melaneelithanallur, 17 in Tenkasi and 14 each in Sankarankoil and Kuruvikulam . A modern rice mill with a capacity of two tonnes husking of paddy per day, was set up by the Tirunelveli Taluk Cooperative Supply and Marketing Society at Thalaiyuthu

in 1970. An initial capital of Rs.13 lakh was invested in the project. Number of rice mills Panchayat union-wise are tabled below:

Sl.no.	*Name of the Panchayat Union*	*Rice mills*
1.	Palayamcottai	27
2.	Manur	27
3.	Sankarankoil	14
4.	Karunkulam	14
5.	Melaveelithanallur	18
6.	Cheranmahadevi	46
7.	Ambasamudram	15
8.	Kadayam	33
9.	Pappakudi	32
10.	Nanguneri	41
11.	Kalakadu	42
12.	Valliyoor	27
13.	Radhapuram	20
14.	Tenkasi	17
15.	Kadayanallur	10
16.	Alangulam	30
17.	Keelapavur	30
18.	Shencottai	10
19.	Vasudevanallur	43
	Total	**496**

Modern Rice Mill, Thazhaiyuthu

Paddy is one of the major crops in the district of which has given scope for running of large number in various taluks. A modern rice mill was originally set up by the Tirunelveli Cooperative Society in the year 1970 with two tonnes hulling capacity per hour but it was permitted to hull 800 tonnes per month. Subsequently, in the year 1973, the mill was brought under the control of the Tamil Nadu Civil Supplies Corporation and the hulling capacity was also increased to 1000 tonnes per month. Initially, furnace oil was used for drying the paddy but it was replaced by dry husk

in 1977. Under the expansion programme, an integrated mill was started in 1981 for the preparation of raw rice and the hulling capacity of the mill was increased to 1600 tonnes per month. BHEL's boiler was erected in the mill in the year 1990-91 for boiling paddy and the hulling capacity was increased to 2500 tonnes per month. During 1998-1999 to an extent of 23864 tonnes of paddy, were hulled in the mill. The surplus husk is sent to other units and also used for the extraction of bran oil. Some of the waste products from the mill such as bran ash etc., are used as manures by the agriculturists.

POWER

Hydro Electric Power stations

The eastern slopes of the Western Ghats in the district provide scope for the hydro electric power projects. Hydro-electric power stations have been erected at Papanasam and Servalar to generate power resources through hydel projects. Power is also generated through non-conventional energy. A wind power farm with the capacity of 15 MW has been established at Muppandal by the Tamil Nadu Newsprints and Papers Ltd., a public sector company of Tamil Nadu State.

Papanasam Hydro Electric Project

Tamiraparani reservoir is the main storage for the Papanasam Power house which is the only existing power station in the basin., The construction of Papanasam Hydro Electric Project, the third in the series of power development in the State, was taken up in the year 1938 next to Pykara and the Mettur Hydro Electric Project. The Papanasam Hydro Electric Project provided for 28 MW of power generation. Generation sets had been arranged with vertical shafts. There are four power units with the installed capacity of 7 MW each. The project was completed in two stages. The first stage was started in April 1938 and completed in 1945-46 and the second stage which began in 1945-46 was over in 1951-52. The Papanasam Power House is located near the Agasthiyar temple at the foot of the Papanasam Falls and about 10 km. from Ambasamduram. The building is a steel framed structure with R.C.C.roof and floor and consists of a machine hall, 125 ft. by 35 ft. is designed to hold four water wheel generators each of 7000 k.w. capacity. A 40 ton electric crane is provided. A tail race pool and channel lead at the lowest convenient point. The transformer yard which accommodates outdoor switchgear is to the West of the building whose architectural features are noteworthy. The site of the dam is at 24 km. of the Ambasamudram-Kannikally road, about one furlong below the junction of the Karaiar and Tamiraparani river. The dam structure is of straight solid, gravity non-overflow type with rubble masonry in cement mortar, 175 ft. high above the river bed and 215 ft. above the deepest foundation with a top width of eight feet between parapets which

are four feet high. The length at top is 744 ft. to beginning of the surplus way located at its right end. Two eight feet six inches diameter pipes built into the structure above river bed with their centre line at 725 feet provide for the irrigation and power requirements. They are fitted with upstream control, operated from gantry at top of dam for emergencies and with down stream regulators for normal operation. The generating plants at Papanasam comprises for 9850 bhp. reaction type turbines operating at 600 rpm. under a net head of 298 ft. driving 7 KW. 112 Kv. 3 phase, 50 cycles alternators.

Water is let out from the reservoir for power generation through discharge valves located at the end of two 8′ 6″ dia. discharge pipes provided with the sill level of 720.75 MSL at the base of the dam. Upstream side of the discharge pipes are controlled by two cut off gates of 12 weight . Hoist gear for cut off gates and movable screens provided for gates consists of 8 HP 3 Ph. electric motor, winch rope, gantry and wire rope, solenoid braking system. Screens, gates and hoist gears were supplied by M/s.Ransomes and Rapier & Co. England Cut off gate ropes are of six strands of 37 wires, 24 mm. dia. with a circumference of 3″ whereas screen ropes six strands of 37 wires, 30 mm dia with a circumference of 3 3/4″ E.E.Company valve is the low head type for a discharge of 3030 c/s at a head of `130 ft. with a valve opening of 4 ft. G & K valve is the high head type discharge regulator with a discharge capacity of 1550 c/s at a head of 143 ft. of water with a valve opening of 2 3/4 ft. Both the discharge valves are operated by hand gear only. Cut off gates and screens are operated either electrically or manually. The speeds of operation of gates and screens (lowering or hoisting by electric motor is 5 ft./Min; by hand lifting is 0.35 ft/Min. and by releasing C.F.Brake 12 ft./Min. The regulator may discharge a maximum of 1434 c/s at RL 850 and 1537 c/s at RL 868. Surplus gates and hoisting gear were supplied by M/s.Jessop & Co. Calcutta. The E.E.Co. regulator is capable of discharging water 2000 c/s. at a low head of 58 ft. in RL 783 and can work up to a head of 150′. The weight of the regulator is 16 tonnes. The weight of the main screen is nine tonnes and auxiliary screen is 4.5 tonnes.The length of gate rope is 815′ - 24 mm. dia-with a breaking load of 29.OT. The length of screen rope is 210′ - 30mm dia. with a breaking load of 46T.

Diversion Weir and Intake

The stored water from the Tamiraparani dam is let down the river up to Mundanthurai where it is joined by the Servalar. The combined flow is then diverted from the river course, about 1.6 km. lower down, into the low pressure pipe lines by means of the diversion weir and intake. This is a masonry structure of gravity type with a non-overflow section 155 ft. long and 50 ft. by 40 ft. above river bed at the left flank and an overflow section for full width of river up to the right flank about 35 ft. high above

river bed and 11865 ft. long of which about 30 ft. is made up along the upstream. The small lake formed by the construction of the weir acts as a Forebay. The intake for the high pressure pipeline is at the non-overflow section. The Forebay provides a small storage of 28 mcft. which is sufficient for daily regulation of flow for power purposes. Work started in June 1938 and was completed by December 1941.

The diversion weir could discharge floods- 1,50,000 c/s pipe intakes are protected in front by rectangular screens in two tier, upper one from 631 fixed, bottom one from 609 to 631. The removable gate for pipes is of roller type and 4 T by weight. Rate of travel in lifting and lowering by motor is 5 ft. min. By hand operation lifting is 0.35 ft/Min. and by hand operation lowering is 12 ft/min. A regulator reservoir of 48.62 cft. capacity has been constructed to collect the run off from the free catchment of 198 sq.km. and the discharge from the main dam. There are two scour vents. One is 3′ x 3′ with a discharging capacity of 240 c/s. at a sill level of 606.5 MSL and the second is 9′ x 9′ with a discharging capacity of 2200 c/s. at a sill level of 609 MSL for desilting purposes. The 3′x 3′ scour gate is operated by hand through screw rod while the 9′ x 9′ scour gate is operated both electrically and manually through hoisting gear of winch crab and wire rope supplied by M/s.Ransomes and Rapier Co., England Hoise rope is of 1- 1/8″ dia. 100 ft. length. There is a spillway section of 1186.5 ft. length with a crest level of 635 MSL. The crest level is increased by 4′ through provision of five rows of planks. Low Pressure pipeline intake level is fixed at 610 MSL.

Two low pressure pipes of 108″ dia. take off from diversion weir. Entry of water into low pressure pipelines (L.P.P.L) is controlled by cut off gates. Fixed and movable screens are also provided in the intake chamber low pressure pipelines (L.P.P.L) cut off gates are operated through hoisting gear of winch craft, wire rope etc., supplied by M/s.Ransomes and Rapier. Operation of the gate is either by hand or motor. Hoist ropes are steel wire ropes of 1 1/8″ dia. and 90′ length for each gate. Right hand ordinary lay steel wire ropes of six strands of 37 wires with hemp care in the centre, 28mm is 3 1/2″ circumstance and breaking load is 39.7.

Low Pressure Pipelines

This commences from the forebay at the left flank of the diversion weir and continues up to the surge tower just above the head of the penstock line. The pipe line consists of two lines of riverted pipes nine feet internal diameter and 3586 feet long up to the centre of the Surge tank, and has a uniform gradient of one in 300. The lines are supported on rollers over rails laid on masonry piers with concrete caps at uniform intervals. Roller supports enable free movement during expansion and contraction. this region being very hot. There are seven bends in the whole course at each of which concrete anchoring is provided, in order to protect the pipes from stresses due to charge of direction.

Two low pressure pipes of 108" dia. 3574 ft. length and 3/8" thick, take off from the diversion weir intake chamber at a sill level of 610.5 MSL. Each pipeline is designed to carry 700 c/s of water. There are nine bends, 10 anchors, 10 expansion joints, three manholes and 121 piers at central distance of 28'-1 1/2". Gradient of the line is 1 in 300. Weight of the pipe per ft. run is 0.23 T Velocity of water in pipe, 1 ft./sec. Pipe lines are supplied by M/s.Indian Hume Pipe Company.

Surge Tank

Low pressure pipes and surge tanks are functioning in the project. There is a vertical differential type surge tank with 25 ft. dia. water chamber and 9' dia. internal riser forming a tee with the main low pressure pipe line. The surge tanks fabricated from M.S.plate is to control and stabilise pressure surges which occur when the lead on the generating sets varies. When lead is off, the water supply to the turbines is reduced which causes a rise in a level in the surge tank. To cater for load being suddenly thrown on the sets, surge tank serves to supply water with differential tank, a dampening effect is introduced that tends increase the stability. The centre line and top of the surge tank are 603.16 MSL and 658.00 MSL respectively.. One 12" drain valve is provided in each surge tank, for emptying the low pressure line and surge tank and for blowing out the sediments periodically. An 8" vulsifure line is run from surge tank and a three inch water line for watering the expansion joints and for feeding the 6000 gallons capacity emergency C.W. tanks neâr power house end, from both the surge tanks.

Valve House

The low pressure pipe (L.P.P)lines ending in surge tanks bifurcate into four 69" dia. pipes. Shortly after bifurcations there is a 66" dia. mechanically operated butterfly valve in each pipe. These valves are normally operated locally when required but usually they are left open. To open a valve, it is first necessary to balance the water pressure on both sides and to accomplish this a 12" dia. by- pass is provided with a hand operated sluice valve through which the pipe line can be gradually filled. When the pipe line is full and the pressure on both sides of the valve is equal the main butterfly valve is opened by operating a hand winch and the bypass is closed. Valve can also be tripped to close from the power housing. 18" dia/ air valve is provided in each pipe line just below B.F. valve.

Penstock Pipe Lines and Power House

Three pipes take off from the Surge tower and run down the hill slope being uniform there is only one bend in the course of the pipes and an anchor of concrete is provided at this point. There are three anchor blocks in all including the top and the terminal ones. The top anchor is in the valve

house wall, second in the middle of the pipe line and the third behind the power house. The top and intermediate anchors are common for all the types while the terminal anchor is independent for each pipe. The pipes run parallel between the top and intermediate anchors and then diverge to suit the machine locations in the Power House. The pipes are of rivetted type. There is a steel structure 132'-6" x 60 which has been enclosed by masonry annexe 125' and 21' with a first floor at 336'-1". The machine hall is 125' x 35' with floor level at 320 MSL. Four pipe lines from the valve house to the power house are 69" dia. and 5/8" thick. The total length of each pipe line is 644 ft. At the upstream end of each pipeline before each anchor block, there is an expansion joint to allow for temperature changes. There are 10 saddles, 25 piers and 2 manholes. A6" valve is provided for each pipeline for emptying. In the first stage of development, there are three machines of 7250 KVA capacity each driven by vertical shaft, Francis type, ingle runner turbines of 9850 H.P.each. The head under which they work is 330 feet and the normal speed 600 r.p.m. There are three numbers of 7250 KVA, 11 KV, 66KV, three phase transformers, each connected to the generators in the unisystem. During the second stage of development, one more penstock with another surge tank and one set of turbine and generator similar to those already installed were erected. The total installed capacity including the second stage of development, one more penstock with another surge tank and one set of turbine and generator similar to those already installed were erected. The total installed capacity including the second stage extensions came to 28,000 KV. This was begun in 1945-46 and completed in 1952. During the years 1991-92 and 1992-93 the power generation in the Papanasam Power House stood at 143.67MU and 105.368MU respectively. Each unit of 7 KW is under expansion to 8.00 MW with the British aid.[7]

Servalar Hydro Electric Project

The Servalar river, a major tributary of the Tamiraparani river, joins the main river at Mundanthurai below the Tamiraparani dam.The Servalar river flood flows were surplus at the diversion weir without being used for power generation at the existing Papanasam Power House since the storage capacity at the diversion weir was meagre. Therefore creation of more storages in the higher reaches of Tamiraparani and utilisation of the surplus water available for power generation was thought of by the State Government. Thus emerged the Mundanthurai unit otherwise known as the Servalar Hydro Electric Project.

Servalar Power House was established in the year 1986 and it comprises the following works. A dam has been constructed across Servalar river with full reservoir Level + 264.57 M. There is an interconnecting unlined tunnel 3323 metres long and of capacity 29 cusecs (1000 cusecs) between Tamiraparani and Servalar reservoirs. A power house has been

constructed at the foot of Servalar dam with one unit of 20 MW capacity. A tail race channel of about 250m. long from the Power House has been formed. With the formation of the inter-connecting tunnel, the waters stored in the existing Tamiraparani reservoir can also be used for power generation at the Mundanthurai Power House before joining the diversion weir of the existing Papanasam Project.The total cost of the scheme including Power House machinery was Rs.42.00 crores. The total energy that can be generated in an average year comes to 75.00 million units.

Diversion Tunnel

The length of the diversion tunnel is 3323m. and the unlined section is 3063m. The length of the R.C lined section is 260m. The area of water way is 10.206sq.m. The maximum discharge is 29 cumecs. The maximum velocity is 2.843 metre/sec. Sill level at entry and at exit is (+) 224m. Slope of the tunnel is 1 in 1200.

Salient Features of Power House

1. F.R.L.of Servalar Forebay - (+)264.57M
2. Centre Line of Distributor + 205.189m.
3. Generator Floor level + 214.00
4. Maximum head.....5.5m
5. Peak draft......79.29 cusecs
6. Minimum head.....22.85 m.
7. Average head........45.72m
8. Average power draft.....20.64 cumecs
9. Minimum T.W.L......210.00 m.
10. Maximum T.,W.L....... +211.00m
11. No.of Unit.....1 Unit of 20 MW
12. Turbine.....Francis Reaction Turbine
13. Power House size......31.7m x 24.06m.
14. Energy generated in an average year 68.42 Million Units

Non-Conventional Energy Sources

A highly favourable wind for the six months during South West monsoon through Shencottai pass which covers 40 km. width between North to South and 60 to 70 km. length West to East is a good source of power. Similarly there is a moderate wind during North-East monsoon (i.e. December, January and February). It covers the area from Ayakudi in

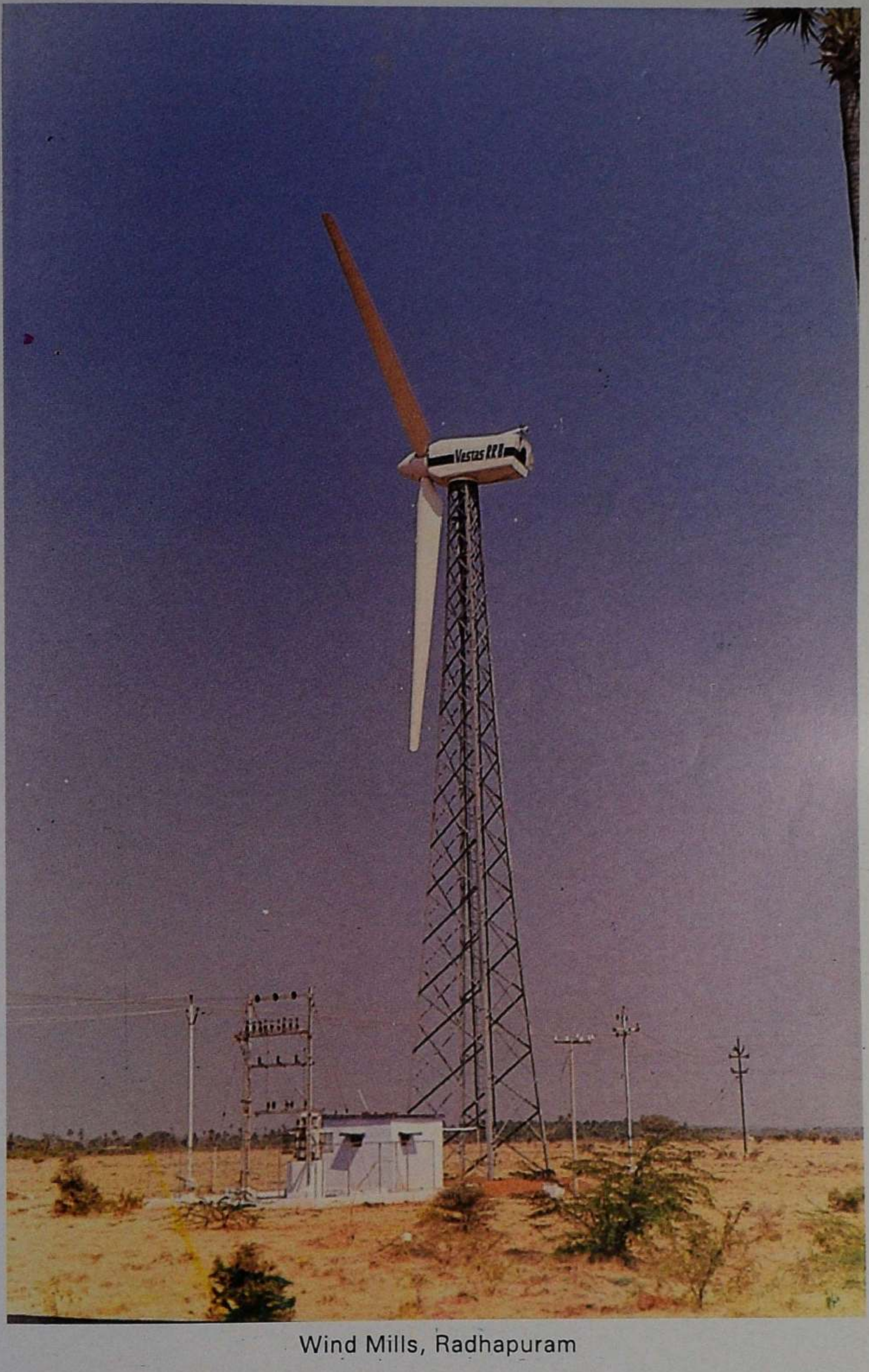
Tenkasi taluk to Ottapidaram in Thoothukkudi district from West to East. Wind Monitoring stations, have been installed at Ayakudi, Naduvakurichi, Nettur, Alagiapandiapuram, Thazhaiyuthu and Marugal Kurichi in the district. All the wind monitoring stations have recorded the annual average wind velocity more than 20 km/ hr. which is required to establish wind farms. A Windmill was established in 1993 at Devarkulam at a cost of Rs.3.5 crore/Megawatt consisting of 28 numbers with the capacity of 250 kw. The total installed capacity is seven Megawatt. The five MW unit was commissioned on 30 September 1993 and the balance two MW was commissioned during October-November 1993. The total installed capacity is 19.355 MW under Tamil Nadu Electricity Board and 27.990 MW under private sector and the units generated are 117 MV by Tamil Nadu Electricity Board and 40 MV under private sector. The non-conventional energy sources supply interrupted power to the areas where WEGs are installed and they paved way for springing up of new industrial units.

Major and Minor Sub-Stations

There were 22 extra high tension sub-stations, one HT sub-station and one line Tap sub station in the district in 1993. Ten extra high tension sub-stations have 110/11mv capacity each, four sub-stations have 66 / 11 kv.capacity each. The high tension sub-station at Moolaikaraipatti has 33/11 kv. capacity and line TAP sub-station at Malayankulam has 2 MVA capacity. There are three transformers each at Alangulam and Shencottai, 13 sub-stations have two transformers and 12 sub-stations have one transformer each.There were 462394 low tension and 74 high tension consumers and the per capita consumption was 319 units in 1993.

Name of the sub-stations, number of transformers, voltage ratio capacity and aggregate capacity are furnished below:

Sl no.	*Name of the sub-station*	*No.of trans*	*Voltage ratio formers*	*Capacity* (in MVA) (in KV)	*Aggregate capacity* (in MVA)
Extra High Tension sub-station :					
1.	Thalaiyuthu 110/11 KV.	2	110/11 KV	16 MVA	32 MVA
	-do-	1	110/33 KV	10 MVA	10 MVA
2.	Melakallur "	2	110/11 KV	10 "	20 "
3.	Palayamkottai "	2	110/11 KV	10 "	20"
4.	Panakudi	2	110/11 KV	10 "	20"



Wind Mills, Radhapuram

Sl no.	Name of the sub-station	No.of trans	Voltage ratio formers	Capacity (in MVA) (in KV)	Aggregate capacity (in MVA)
5.	Kottaikarungulam	1	110/11 KV	10 "	10"
	-do-	2	110/33 KV	10 "	20 "
6.	Sankarankoil	1	110/11 KV	10 "	10 MVA
7.	Palayapettai "	1	110/11 KV	10 "	10 "
8.	Veeravanallur "	1	110/11 KV	10 "	10 "
9.	Koodankulam "	1	110/11 KV	10"	10 "
10.	Vannikonendal 66/11 KV.	2	66/11 KV	3 "	6 "
11.	Vickramasingapuram 66/11 KV	2	66/11 KV	10"	20"
12.	Kalakadu "	2	66/11 KV	5"	10"
13.	Tenkasi "	1	66/11 KV	5"	5"
14.	Shenkottai 66/11KV	3	66/11 KV	1 MV	3 MVA
15.	Kadayanallur "	2	66/11 KV	5"	10"
16.	Alangulam "	3	66/11 KV	2"	6"
17.	Surandai	2	66/11 KV	5"	10"
18.	Puliyangudi "	1	66/11 KV	7.5"	7.5"
19.	Naranapuram "	2	66/11 KV	5"	10 "
20.	Kalingapatti "	1	66/11 KV	3	3"
21.	Perumalapatti "	2	66/11 KV	5"	10"
22.	Uthumalai "	1	66/11 KV	5"	5"
HT-Sub-station :					
1.	Moolakaraipatti		33/11 KV	3.15 MVA	6.30MVA
Line TAP SS:					
1.	Malayankulam LTSS	1	66/11 KV	3.15 MVA	6.30 MVA

Transmission and Distribution Lines in Service

The total length of extra high tension, high tension and low tension lines as in March 1993 were 187.726 Km. 3789.88km. and 146.41 .887 km. respectively.

Distribution Transformers energised on 31 March 1993

S.no.	*Capacity*	*No.of transformers*	*Capacity(in KVA)*
1.	500 KVA	1	3500
2.	250 KVA	307	76750
3.	150 KVA	17	2550
4.	100 KVA	1533	153300
5.	75 KvA	220	16500
6.	63 KVA	1084	68292
7.	Others	497	24890
	Total	**3665**	**345782**

LARGE AND MEDIUM SCALE INDUSTRIES

The district had a total of 22 large and medium scale industries in 1993. Of which 19 units were under private sector and two units under cooperative sector and the remaining under corporate sector. Textile mills are located at Sankarnagar, Pettai, Shencottai. Papanasam, Nanguneri etc. There exists one paper mill near Cheranmadevi, one cement industry and two non-metallic mineral producing units at Sankarnagar, roller flour mill at Gangaikondan and one modern rice mill at Sankarnagar.[8] Description of some of the large and medium scale industries along with line of activity are given below:

CEMENT INDUSTRY

The India Cements Limited

Sankarnagar Works of the India Cements Ltd., is one of the oldest cement plants in Tamil Nadu under private sector. It is a large scale industry which started its commercial production in August 1949 with a licensed capacity of about 4.00 lakh tonnes per annum and steadily increased the capacity over the years to 10.00 lakh tonnes per annum (LTPA) cement by 1990-91. The plant is located at Talaiyuthu, eight km. away from Tirunelveli town on Madurai road. At the time of inception, the plant manufactured cement under wet process only with initial capacity of 350 tonnes per day, with investment of Rs.5 crores. Subsequently, the plant was first expanded in 1956 to 700 TPD, secondly in 1959 to 1500 TPD and thirdly in 1968 to 2700 TPD, Products such as ordinary Portland cement IS: 269/1989 and Portland Pozzonona cement IS:1489/1991 are manufactured.

The company has embarked on modernisation of its plant with a capacity of 3000 TPD at a cost of Rs.106 crores by which the old wet kilns and the preclinkerising facilities were replaced by a modern practitioner kiln and preclinkerising facilities with a computerised control. The Dry plant commenced its production from July 1990. The industry requires 4500 tonnes of limestone per day, supplied by the limestone mines located at Talaiyuthu , Nanjankulam limestone mine, Sethurayanpudur Sellianallur , Valliyoor , Vijayapathy Kudankulam and a sizeable quantity of lime is also purchased from private parties M/s.Krishna Mines M/s.South India Mines and Minerals Ltd. About 2000 employees were employed both in factory and mines. Bauxite is purchased from M/s.Gowtham Bauxite, Dharmapuri and Alumina Industries, Mettupalayam. Iron ore is bought from Ganesh Minerals, Bhadravathi and Gypsum from SPIC, and Seltpan Gypsum fromThoothukkudi The plant provided employment to 1382 and about 607 persons are employed in mines. India Cements General Employees' Union and Cement Manufacturers' Association have been formed in the industry.

Manufacturing process

Dry process: Limestone received from different quarries, crushed in the Hammer Mill and taken through a number of belt conveyors to a linear stockyard. From here limestone is reclaimed using bridge type reclaimer and taken to mixed limestone hopper. There are four different hoppers, one for mixed limestone, the second one for high grade lime stone the third one for Blue dust and Bauxite and the fourth one for clay. The raw materials proportionately mixed and conveyed to a Polysius Vertical Roller Mill and ground between the two roller pairs and a grinding table. The ground material is dried and lifted by kiln exit gases through nozzle ring and carried to the Dynamic separator.Then it is classified into finished product and oversize. Oversize material falls directly on the centre of the Grinding Table. The finished product is separated in an Electostatic Precipitator (ESP). From there it is pumped into extracted through the Central Chamber of the silo of the 5-Stage Preheater. The raw meal is calcined to 90 per cent using pulverised coal in the Precalcinator. The calcined material enters the kiln and clinkerisation is taking place in the burning zone at a temperature of 1450^0 C using pulverised coal in the kiln. The hot clinker is cooled in the Grate Cooler. The cooled clinker is taken through Deep Bucket Conveyor to Clinker silo. From Clinker silo it is discharged to Rubber Belt Conveyor, gypsum and carried to cement mills. In Cement Mills clinker, gypsum and flyash are mixed and ground to get Portland Pozzolana Cement (PPS) and only with gypsum for Ordinary Portland Cement (SPC).

The company introduced many welfare schemes for the benefit of its employees and their families and the expenditure towards employees welfare was Rs.3.60 crores per annum for both statutory and non-

statutory welfare measures. Welfare measures include housing, medical, recreation club, typewriting and shorthand institute for the benefit of employees' children tailoring institute, appalam unit, Kalyana mandapam, family planning etc. Company employees are being covered under Janatha Insurance policy and Group Insurance Scheme. The company pays the premium of Rs..20000/- per year under Janatha Insurance policy. Death benefit is covered. The employees drawing above Rs.1000/- p.m. are covered under Group Insurance scheme. The premium is paid by the company. Death/Injury benefits are covered. Primary and higher secondary schools and polytechnic are run by the Management. There is a cooperative store maintained both by the employees and management. Provisions, cosmetic, textiles etc., are supplied at reasonable prices. The main stores is functioning in the old colony and its branches are located in the New colony, Talaiyuthu and Vadakku Talaiyuthu. A cooperative thrift and credit society is functioning for the benefit of the workers from 11 November 1968.

Death Relief

The family of a worker who dies during the service is paid a sum of Rs.10000/- family members. A sum of Rs.1000/- is paid every month to the family member for 10 years or till the date of retirement of the deceased employee whichever is earlier. A sum of Re.1/- is collected from all the employees and Management makes equal contribution and the total amount is paid to the deceased family members.

CHEMICAL INDUSTRY

Industrial Chemicals and Monomers Ltd.

Industrial Chemicals and Monomers Ltd.,has set up a medium sized plant at Sankarnagar in the year 1952 to manufacture chemicals with a capacity of 300 tonnes per annum[9]. The installed capacity increased to 10000 tonnes per annum in 1959 and 12000 tonnes per annum in 1979. The capital investment during the year 1993 was Rs.227.82 lakhs. Raw materials such as limestone, charcoal etc., are purchased mainly in the district itself. About 300 employees were employed in the factory . The amount of wages paid in 1960 was Rs.1 lakh which increased to Rs.5 lakh in 1993. The employees have formed Industrial chemicals and Monomers workers Union in the factory. Employees are covered by social security acts viz., Employees Provident Fund, and Employees State Insurance scheme. A subsidised canteen is run by the management. Employees are encouraged to have saving habits. A cooperative thrift and credit society

which caters to the needs of employees. To encourage family planning, employees are given a cash incentive of Rs.300/- and four days leave. All employees are covered by Janatha Insurance Policy to meet any unforeseen accidents liabilities outside the work area.

PAPER INDUSTRIES

Sun Paper Mill Ltd.

The Sun Paper Mill Ltd., a private sector company has established, a medium scale paper industry at Vadakku Ariyanayakipuram near Cheranmadevi about 20 km. from Tirunelveli and 675 km. from Chennai, in the year 1964 with a capital investment of Rs.35.12 lakhs. The investment increased to Rs.910.61 lakh in 1993. Newsprint paper is the main product manufacture in the industry. The industry has an installed capacity of 15000 tonnes per annum and the actual production capacity is 22000 tonnes. During the year 1992-93, the industry produced finished products to a quantity of 19445 tonnes.

The mill procures raw materials such as local country wood (Odai maram) from various parts of the Tirunelveli ,Thoothukkudi and Ramanathapuram districts, hoisery rags from Tirupur, waste paper from various towns in Tamil Nadu and Kerala, soft wood pulp imported from U.S.A., Canada, Sweden etc. Further non-fibre raw materials such as roshin from Uttar Pradesh and Kashmir, Aluminium sulphate from Ranipet and Mettupalayam, soapstone powder from Salem, Andhra Pradesh and Rajasthan, starches from Andhra Pradesh and Karnataka, dyes from Chennai, sodium silicate from Madurai and Tanjore, sodium sulphite from Gujarat and Chennai, sodium hydroxide lye and chlorine from Chennai and Gujarat, Soda ash from Thoothukkudi husk and furnace oil from Tamil Nadu are purchased for manufacturing paper. During 1993, about 705 workers were employed in the Paper Mill. There are two workers unions namely Sun Paper Mill Employees Union and Sun Paper Mill Anna Tholilalar Sangam in the Industry.

Manufacturing Process

Odai wood, the primary raw material is chippered into small pieces and softened with steam and chemicals and refined in heavy duty machines. The pulp so obtained is admixtured with rag pulp, imported soft wood pulp and slushed waste paper pulp in definite proportions and chemicals and additives are added in correct quantities to impart strength to the paper. Dyes are added to get proper shade. This pulp is run as paper machine. In the paper machine dilute pulp slurry is first dewatered in wire section, then pressed between rollers and wet felt and finally dried in steam treated dryers. The dried paper is calendered to impart smooth finish to paper and wound on reeler. Finally the wound paper is rewound to sizes required by the customer.

Welfare Measures

Quarters have been provided to the Supervisors category There is a Sun paper mill cooperative store, the major shares of which are owned by the Mill, supplies essential commodities to the members. The mill has major shares in the store . There is a sports club and the management supplies sports materials free of cost.

FLOUR MILLS AND FABRICS

Koilpatti Lakshmi Roller Flour Mills Ltd.

Koilpatti Lakshmi Roller Flour Mills Ltd. a private sector company has established flour mills sheet metal division and textile units at Gangaikondan, 16 km. from Tirunelveli and about 600 km. from Chennai.

Flour Mill: A medium scale factory was established in the year 1964 with the installed capacity of 42000 tonnes. The capital investment during inception was Rs.85.48 lakh. This plant produces maida, sooji, atta and bran and raw material viz., wheat, is purchased from Food Corporation of India and also from open market in Punjab, Haryana, Uttar Pradesh and Rajasthan. The Flour mill is a member of the Tamil Nadu Roller Flour Mills Association. The mill produced a quantity of 21623 M.ton. during 1992-93.

Textile Units

The Koilpatti Lakshmi Roller Flour Mills Ltd., has established two textile units for manufacturing cotton in the years 1982 and 1988. The installed capacity of the first textile unit was 44960 spindles, and the actual production during 1992-93 was 1429459 kg. The installed capacity of the second textile unit was 108 Rotors and the actual production during 1992-93 was 2453493 kg. A sum of Rs.1052.84 lakh was invested for expansion.[10] Virgin cotton is purchased directly from Tamil Nadu, Andhra Pradesh and Karnataka to the first unit and the second unit uses milk waste as well as virgin cotton. A sum of Rs.472.10 lakh was invested under expansion programme. The company is a member of the South India Mills Association, Koilpatti, Lakshmi Roller Flour textiles Employees Association is looking after the member employees. Medical benefits to the employees and their families are extended. Free tour programmes, marriage loans, house construction loans etc., are given at nominal rate of interest.

Sheet Metel Division

Sheet metal division was set up in the year 1978, at a cost of Rs.87.91 lakh. Raw meterial namely steel sheets are purchased from Lakshmi Machine Works Ltd., Coimbatore, Lakshmi Automatic Loom works Ltd., and Hindustan Motors Ltd., and they are mainly used for job work.

Weaving

The weaving of cotton was a hereditary employment of the Kaikolars/ Pattariars (Pattu Saliyars), and Pattunulkarars and now forms the occupation of a large number of Muslims , Iluvars and also other community people. Their streets were characterised by width, lined with two rows of trees to give shade to the workers at the long line of out stretched warps. The important weaving centres are Ambasamudram, Kallidaikurichi, Viravanallur, Pottalputhur, Tenkasi and Kadayanallur.Pattunulkarars are numerous in Viravanallur, Vellankuli and Palayamcottai. Mohammedan weavers are found in Kallidaikurichi, Pottalputhur, Melapalayam. Iluvars are common in Ambasamudram taluk. Till the import of machine made cloth in 1860, broad cloth of the district found already sale in European markets. The rich Brahmins of Kallidaikurichi had their brokers, or *tharagars* in all the villages of Ambasamudram taluk. They advanced money to the local weavers for the purchase of yarn etc., and bought the finished products from them and were sending them on to Malabar, Cochin and Travancore where they owned their own shops. In Kallidaikurichi alone there were more than 1500 looms. Altogether there were 20000 looms all using mill yarn from 20s and 60s though yarns of finer counts were used to a considerably made and exported to the plantation workers to Sri Lanka and the Straits.

Sankarankoil, Pulliyankudi, Kadayanallur, and Viravanallur are the chief centres for weaving sarees. Towels 3x1 1/2'[cubits] are in great demand locally and among the Malayalis. Melapalayam is the largest centre and mostly Muslim families are engaged in weaving. The products range from lungis to sarees and the chief foreign markets for these goods are Sri Lanka, Myanmar, Penang, Singapore and other eastern countries. They were also sent to Travancore. Cheap varieties of lungis are in great demand among the Singhalese who use them for under garments. The Pattariars and Pattunulkarars of Cheranmadevi, Viravanallur and Kallidaikurichi produce superior kind of dhoties for men known as a *mundu* and *nariyals* in which there may be borders of silk and lace.Sarees of pure silk in warp and weft are woven by Pattunulkarars' families especially in Viravanallur. For less costly sarees cotton is used in the weft. They get their silk dyed ready from Kumbakonam. The Pattariars have taken to this work also. At Vadakankulam the mission authorities are trying silkworm rearing.

Spinning Mills

During the early part of the nineteenth century the industries connected with the treatment of cotton were the most important. It was estimated that at least seven eighths of the area was planted under cotton cultivation. Three spinning mills, thirteen ginning factories, and six steam processes were employed in the treatment of cotton, in addition to these,

there were numerous hand gins (manai) worked either by cotton growers on their own account or owned and controlled by small industrialists, handlooms for the production of carpets, blankets and cloths of all kinds existed in hundreds throughout the district. In all its various stages after harvest cotton industry provided employment and a means of a subsistence for one out of every twenty five of the population of the composite district. Hand spinning industry had been extinct, the few spindles which had survived the competition of imported machine made yarn having fallen into almost complete disuse with the establishment of spinning factories in the district.[11]

"Tinnevelli Mills" at Vikramasingapuram was the first of its kind in the district. The idea to establish a mill was put forward by Lord Napier, Governor of Madras, who visited the district in 1869 and suggested a scheme for the utilisation of the Tamiraparani as a motive power to work a cotton mill. He selected a site between the Papanasam falls and the temple, apparently at the point where the Kodaimelalagian dam crosses the river by considering that in all seasons the water requirement was enough for the mill. Accordingly in 1869 Mr.M.Duval, a French engineer stationed at Pondicherry was sent to Tirunelveli who examined the project scientifically and sent a report to Government for establishment. That report was referred by Government to Madras Chamber of Commerce and it appeared that the project was dispensed with. In 1883 Mr.Frank Harvey, at that time engaged in the cotton trade of the district proposed to build a mill at the foot of the hills by generating power from the Papanasam Falls. In 1885, the "Tirunelveli Mills" company Ltd., was formed in Vikramasingapuram at some distance from the right bank of the river. The water was carried off above the fall by a channel about 2.5 km. long and then by a cylindrical iron pipe to the factory. Work started in 1885 with 1000 spindles; three years (1888) later 6000 more were added. A second and much larger mill was opened in 1908, the total number of spindles in the two factories exceeded 40000. In 1930, the Tirunelveli Mills and the Madura mills were amalgamated and a further extension was carried out and 1700 employees worked on 60000 spindles. In the middle of 1930 and a mill accommodated 1,00,000 spindles under expansion scheme. The building is one of the most modern fire proof constructions.[12]

Madura Fabrics

Madura Fabrics, one of the reputed mills in spinning and textiles, is a division of Coats Vyella India Limited. More than a century old industry under private sector, it was established in the year 1880.It is functioning in collaboration with Coats Vyella plc UK.This industry is 50 km. from Tirunelveli and 700 km. from Chennai. It is engaged in spinning, weaving and processing. The spinning unit has 54800 spindles. The quantity of yarn produced per day is 19137 kg. The weaving unit has 806 looms and it manufactures one lac metre of cloth per day. The processing unit processes 0.95 lac metres per

day. The raw materials for the industry are purchased locally and imported from abroad as well. The industry provides employment to 5350 persons as in March 1994 and a sum of Rs.15.60 crore is paid as wages, per annum.

Family Welfare

The employees are educated on family planning needs. The dispensary of the company has been recognised by the Government of Tamil Nadu for conducting laprascopic operations. The company gives incentives of Rs.50/- in addition to those provided by the Government for women who undergo sterilization. Monetary incentive of Rs.500/- after second child, and Rs.1000/- after first child, is given to the employees who undergo family planning. Additional grant of Rs.200/- from Government was given to the canvasser and acceptor. Contraceptives are supplied free of cost. Under the "Health for all scheme", free eye camps, skin examinations, ENT tests are organised.

Educational Institutions

The Papanasam Labour Welfare Association was formed to run schools for the children of the employees. One Primary school and one Higher Secondary School are run by the Papanasam Welfare Association. The company is making payment to meet certain expenses incurred by the schools. Both the schools are getting Rs.26 lakhs as aid from the Government and Rs.2.75 lakhs from the company per annum. About 90 per cent of the students are the employees children. Based on the job requirements uniforms and foot wear are supplied to employees. About 1500 employees are supplied with uniform cloth.

Cooperative Stores

There is one cooperative store which supplies groceries, clothes, ration items, etc., to employees at fair prices. There are two employees cooperative thrift and credit societies for workers and two such societies for administrative staff are functioning.

Workers Education

A well established workers' education scheme is in vogue in the mills. Six workers turned teachers who are trained by the workers Education Board conduct unit level classes regularly. The syllabi prescribed by the Directorate of workers Education is followed. Special guest lectures in specific subjects are organised with resource persons from outside. Regular refresher courses for workers education teachers are organised.

Death Relief Fund

This scheme is being introduced from 1 April 1983. For creation of the death relief fund Rs.2/- was collected from each worker and equal

amount was contributed by the company. Rs.3000/- was given as death relief fund to the deceased workers' family. This amount was gradually increased to Rs.20000/-. A sum of Rs.2500/- in cash is given to the deceased workers' family at the time of death and the balance amount of Rs.17500/- is given by cheque. The contribution amount by workers is increased to Rs.10/-.

A safety training programme is conducted for the workers of various departments. Safety exhibitions are organised. Safety posters and models of machines are displayed. Dangerous parts of the machinery are explained to the workers. Festival advance and emergency advance are paid with nominal rate of interest and the amount is recovered in easy instalments from their wages with a view to meet the urgent domestic expenses, sickness etc.

The Madura Coats Employees Housing Society Ltd., was formed in 1938 for the welfare of the employees. About 83 houses in three blocks were constructed at Agasthiarpatti in the year 1968-69. There is a sports council to encourage sports; small savings scheme is encouraged among employees; employees' children are given scholarship for their higher education through a Trust formed by the company. In order to appreciate the long service of the employees, a scheme was introduced in 1977 to present award to those who have put in 30 years of service. Gratuity is payable to employees on the termination of their employment due to superannuation or retirement or resignation or death under the payment of Gratuity Act, 1972. The following employees unions are functioning in the mill:

1. National Textile workers Union
2. Papanasam Labour Union
3. Agasthiar Labour Union
4. Dravida Panchalai Thozhilalar Munnetra Sangam
5. Nellai Mavatta Anna Panchalai Thozhilalar Sangam
6. District Textile workers union
7. Madurai District Mill workers union
8. National Engineering workers union
9. Madura Coats Electrical and other section employees Union
10. Madura coats staff union
11. Harvey Employees union
12. Textile workers union
13. Madura Coats Thozhilalar Sangam
14. Theisiya Mill Thozhilalar Sangam
15. National Labour Organisation

Balaramavarma Textile Mills, Shencottai

This mill located at Domodar Nagar outskirts of Shencottai was initially started in the name of Balaramavarma Textiles Ltd., in 1948 as a Public Limited company. After a short period, the company went into the hands of Sri Sarma of Trivandrum due to administrative lapses by the managing agents Karayalar and Rangasamy Naidu sons. Subsequently due to various factors the mill became sick and was closed on 25 October 1970. Consequently, the mill was taken over by the Tamil Nadu Textile Corporation from 20 November 1972. It was nationalised with effect from 1 April 1974 and was taken over by the National Textile Corporation from 1 April 1976 and was brought under the control of the National Textile Corporation (Tamil Nadu and Pondicherry Ltd.,[13] The machineries available at the time of transfer were mostly imported ones but were in poor condition. Modernisation and expansion were made between 1975 and 1983 and the spindlage was increased from 17856 to 25376. The capital investment in 1995 was Rs.605.04 lakh. The mill is manufacturing blended yarn. During 1994-95, 11.48 lakh kg. of yarn to the value of Rs.1507.06 lakh was manufactured. Required raw material is purchased from the Cotton Corporation of India, Gujarat State Coop.Cotton Marketing Federation and also from private parties. In 1995, about 344 employees were working in the mill. The amount of wages paid in 1994-95 was Rs.194 lakh. The mill is a member of the South India Mill owners Association.

Gitanjali Mills Ltd.

The Gitanjali Mills Ltd., established a medium scale spinning factory at Sri Gomathipuram in Sankarankoil in the year 1956 to manufacture cotton yarn. The capital investment of the factory during 1994 was Rs.3.25 crore. Raw cotton is purchased from Andhra Pradesh, Karnataka and also from the local market at Rajapalayam. This industry is a member of the Southern Indian Mills Association and Indian National Trade Union Congress.

Manufacturing process:

Cotton Bale from Cotton market - Mixing Room -

Blow Room - Carding - Drawing-

Simplex - Spinning - Cone Wind- Packing (Bag)
Cone Winding-Doubling-Reeling-
Bundling Reeling-Bundling & Packing-
Market.

Blow room - Here cotton from bales is opened and cleaned. The cleaned cotton is formed as laps of uniform width, weight, and density.

Carding	-	Laps from Blow Room are fed to the carding machine. It combs the fibres of lap, parallelists, purifies some of motes, seed bits, leaf bits, neps and impurities, lint and short fibres. The cotton in lap form is converted to silver form with the help of calender rollers and trumpets in carding machine.
Drawing card	-	Card silvers are atenuated and parallelised and irregularities are minimised to form a Drawing sliver.
Simplex	-	Drawing slivers are undergone drafting and cotton is given twist. Then the cotton is wound upon plastic empty bobbins to form 'roving'.
Spinning Frames	-	It draws out the rowing and imparts final twist, spinning the Browing into 'yarn. Built up into cops on plastic empties.
Doubling Machine	-	Yarn is doubled and twisted in the Doubling machine to give smoothness, to stabilise the twist and to add strength.

The Gomathy Mills

The Gomathy Mills is a medium scale spinning factory established at Viravanallur in the year 1956 at a project cost of Rs.5.40 lakh for manufacturing cotton yarn with an installed capacity of 26616 spindles and 168 rotors. After expansion in stages the capital investment increased to Rs.1355.84 lakh. The mill is located 38 km. from Tirunelveli. It manufactures 100 per cent cotton yarn count ranging from NE.30/2 to NE.80/2 and a quantity of 18 lakh kg. is produced per annum. Raw cotton is purchased indigenously and also from abroad through agencies. About 350 persons were employed in the Mills in 1960 and the number of persons employed had increased to 485 in 1994-95 and a sum of one crore was paid as wages in 1994. Employees are covered by ESI scheme. Workers and their family members get medical treatment from ESI Dispensary (Mobile) Pettai Uniforms are given to Fitters and Maistries once a year. Death Relief Fund scheme has been introduced to the workers. Each worker has to contribute Rs.10/- and the management contributes Rs.10/- per worker. The amount is disbursed to the legal heirs of the deceased worker. The Gomathy Mills is a Government recognised Export House.[14]

Sankar Spinning Mills Private Ltd.

The Sankar Spinning Mills Private Ltd., has established a medium scale industry in the year 1989 at Sankarnagar at a cost of Rs.8.70 lakh and subsequently increased to Rs.17.40 lakh in stages. With an installed capacity of 10920 spindles. The actual production capacity is 7.08 lakh kg. of cotton yarn. At the time of inception, about 120 persons were employed in the factory. In 1995 the industry provided employment to 160 persons. The employees are covered by Provident Fund and Employees State Insurance Scheme.[15]

Karpagam Spinners Private Ltd.

M/s.Karpagam Spinners (P)Ltd., has set up a medium scale spinning factory at Vagaikulam near Thirupanikarisalkulam in the year 1982 with installed capacity of 800 spindles. It is situated about 12 km. from Tirunelveli. The actual production capacity during 1982 was 6000 kg. per annum. The factory was established at a cost of Rs.15 lakh in 1982 and subsequently another 10 lakh rupees has been spent for further expansion of the factory. The factory is engaged in the manufacture of hoisery cone yarn and hank yarn. The factory produces 9,00,000 kg. of hosiery cone yarn and hank yarns per annum. Raw material cotton is purchased from Maharashtra, Andhra Pradesh and Tamil Nadu. During the year 1982 the factory provided employed to 27 persons and in 1996 there are 158 employees are working and a sum of Rs.3367878/- is paid as wages per annum. This company is a member of the Southern India Mills Association.[16]

Sivakumar Spinning Mills (P) Ltd.

Sivakumar Spinning Mills (P) Ltd., established a medium scale spinning factory at Sankarnagar in 1974 with 7592 spindles installed capacity investing Rs.45,000/-. Subsequently this was increased to Rs.10.5 lakh. The mill produces 1500 kg. of 40s count per day in three shifts. Raw cotton is purchased in Tamil Nadu and also from northern India. In 1993, there were 167 workers in the mill. The company is a member of the Southern Employers Association.[17]

Seyed Cotton Mills

Seyed Cotton Mills (P) Ltd., has established a medium scale industry at Moondradaippu on NH 7 in Nanguneri taluk which is situated 18 km. from Palayamkottai. The cotton mill was established in February 1986 with the installed capacity of 16.688 spindles at a cost of Rs.1.45 crore. The capital investment increased to Rs.7.03 crore in 1993. The industry manufactures cone yarn and hank yarn to a quantity of 4500 kg per day. Cotton is purchased from Theni, Rajapalayam, Kovilpatti,in Tamil Nadu and from Guntur and other areas in Andhra Pradesh. In 1986 there were nine workers employed in the factory and the strength increased to 224

in November 1993 consisting of 124 permanent staff, 45 probationers and 50 apprentices. There are two employees union with Bharat Mazdoor Sangam, and Seyad cotton Employees union. The company is a member of the Southern India Mills Association.[18]

Cooperative Spinning Mills at Pettai, Tirunelveli

Consequent to the acute problem in the handloom industry to get a regular and adequate supply of yarn of standard quality and counts at reasonable prices to the weavers it was proposed to start a cooperative spinning mills by the Madras State Handloom Weavers' Cooperative Society contributed to Rs.15 lakh towards the share capital. Land, partly constructed buildings owned by the Murugan textiles, at Pettai were purchased. By the end of 1957, the main buildings of the mills were completed and the bulk of the machinery was erected. In 1958, the erection of 16000 spindles was completed in two stages. The distinction of having the first Cooperative Spinning Mill in Tamil Nadu goes to Tirunelveli district. This mill known as the 'South India Coop.Spinning Mill' was established at Pettai in 1958.The membership in the mill was open only to the Madras State Handloom Weavers' Coop.Society, the Primary Weavers' Coop.Societies situated within its area of operation.The authorised sharecapital of the mill was Rs.60 lakhs made up of 6000 shares of hundred each. The paid up share capital of the mills was Rs.41,86,700 contributed by the Tamil Nadu State Handloom Weavers' Cooperative Society, Primary weavers' cooperative societies and the Tamil Nadu Government. The overall capacity of the mills with its 1600 spindles running two shifts was 750 bales of yarn of 20s per month. The total estimated capital expenditure of the mills was as follows: lands and buildings including electric installation and humidification Rs.13.36 lakhs. and machinery including motors, freight import duty, clearing charges, erection etc. Rs.34.58 lakh. The mill started production of yarn with effect from July 14, 1958 and about 8000 spindles were running at the beginning. The cotton required was purchased mainly through the Cooperative Marketing Societies in Tirunelveli district and the produce was delivered to the Madras State Handloom Weavers' Co-op.society Ltd. The mill a major industry is under the control of the Commissioner of Handlooms and Textiles, Chennai. The capital investment at the time of establishment was Rs.38.58 lakhs which was increased to Rs.507.67 lakhs and stood at Rs.547.25 lakhs in 1994-95. It manufactures 100 per cent cotton yarn ranging from counts 20s to 100s carded and combed single and double in hank and core forms. It manufactures a quantity of 3.22 lakh kg. in terms of 40s per month. Raw cotton is purchased from Cooperative Federations through Tamil Nadu Cooperative Spinning Mills Federation, Chennai and also from local markets. During inception, about 403 persons were employed and during 1995, there were 1234 persons working in the mill and a sum of Rs.620.65 lakhs was paid as wages in

1994-95 as against Rs.28.50 lakhs in 1965-66. The mill is a member of the Southern India Mills Association, and the All India Federation of Cooperative Spinning Mills Ltd. Some of the employees association in the mill are:[19]

1. South India Cooperative Spinning Mill Workers Association,
2. National Cotton Mills General Employees Association,
3. District Cotton Mills Workers Association,
4. Nellai District Cotton Mill Workers Association,
5. South India Cooperative Spinning Mill, Nellai District and
6. South India Cooperative Spinning Mill Workers Welfare Association.

Sundaram Textiles Limited

Sundaram Textile Ltd., has set up a spinning factory to manufacture cotton yarn at Mambinagar near Nanguneri about 30 km. from Tirunelveli, in the year 1963 with 12500 spindles at a cost of Rs.47.23 lakh. It is a major industry established by the T.V.S.Group, one of the leading industrialists in South India .The installed capacity of the plant increased to 42680 in 1993. The gross value on fixed assets increased to Rs.113.48 lakh in 1973 registering a three fold increase. In 1983 it rose to Rs.333.61 lakh and in 1993 it stood at Rs.1269.42 lakh showing appreciable growth in investment in fixed assets. During 1992-93, a total quantity of 2061640 kg. of cotton yarn was manufactured. The raw materials are procured mainly from Madhya Pradesh, Maharashtra, Andhra Pradesh, Tamil Nadu and Karnataka. The factory provides employment to 400 persons. T.V.S.Workers' Union has been formed in the industry.[20]

Nellai Cotton Mills Limited

Nellai Cotton Mills Ltd., has established a medium scale unit at Sankarnagar near Tirunelveli to manufacture cotton yarn in the year 1956 with an installed capacity of 15396 spindles. The production capacity of the plant is 2500 kg. day with average 20s count. The modernisation of the unit has been done from time to time. The plant provides employment to 285 persons. Nellai cotton mills union (T.N.T.U.C.), Nellai Mavatta Desia Panchalai Thozhilalar Sangam (N.L.O), Nellai Cotton Mills Staff and Jobbers Union, District Textile Union (A.I.T.U.C.), Mavatta Dravida Panchalai Thozhilalar Sangam (C.I.T.U) are the emloyees' unions in the mill.[21]

Sri Ganapathy Mills

M/s. Sri Ganapathy Mills, under private sector has established a unit at Sankarnagar in 1951 to manufacture cotton yarn. The capital

investments on land, buildings, and machineries were about Rs.39,57,191. The industry provided employment to 428 persons. The important unions in the mill were Textile Workers Union, Mavatta Panchalai Thozhilalar Sangam, National Textile Workers Union, Ganapathy Mills workers Union and Textile staff Association.

Thirumalai Mills

M/s.Thirumalai Mills, established a unit at Gandhinagar on Tenkasi road near Tirunelveli in the year 1962 to manufacture cotton hank yarn and cone yarn out of indigenous raw cotton. The capital investments on land, buildings and machineries were about Rs.6,01,500; Rs.13,39,100 and Rs.34,55,300 respectively. There were two employees unions namely District Workers Textile Union and Thirumalai Mills Workers Union in the Mill. Employees are benefited by the cooperative thrift and credit society.

SUGAR INDUSTRY

Dharani Sugars and Chemicals Limited

Dharani Sugars and Chemicals Limited, promoted by Non-Resident Indians has set up a large scale sugar industry at Narayanapuram nine km. from Sivagiri and 12 km. from Puliangudi in Sivagiri taluk in the year 1989. It is located at a distance of 575 km. from Chennai. The capital investment at the time of inception was Rs.22.02 crores with which an additional amount of Rs.4.59 crore was invested for further development. The initial installed crushing capacity of the industry was 2500 tonnes a day and subsequently the crushing capacity increased to 3000 tonnes a day. Sugar is the main product and molasses and bagasse are the by-products. The industry provides employment to 350 persons and a sum of Rs.80.46 lakhs was paid as wages in the year 1992-93. Sugarcane is obtained from the cane command area owned by the company spreading from Watrap in Virudhunagar district to Tirunelveli and they are transported to the industry by lorries, tractors and bullock carts.

Manufacturing process of Sugar

Process adopted here is three boiling system namely A.B.C boiling. For 'A' boiling syrup and melt is used. When the boiling is over, the material from the Pan (Massecuite) is dropped into the Crystallisers and then send to centrifugals for separation of mother liquor. The mother liquor separated from A-Massecuite is used in B-Boiling. The sugar that comes from the B-Massecuite is used in C-Boiling. The C-Massecuits is called in water called crystallisters up to 40°C and then cured in Centrifugals after reheating to 50°C. "The sugar separated is melted and sent to A-Boiling. The molasses that comes out from curing the C-Massecuite is stored in a steel storage tank as a by-product.

Dharani Sugar Factory, Sivagiri

The A-Massecuite (First Grade) is cured in fully automatic high speed centrifugal machines where enough wash is applied to remove all molasses films adhering the crystals. The sugar crystals are then discharged and passed through hoppers, where the sugar is subjected to drying first and then cooling. The dried sugar is seized in a Grader for marking different grades, bagged, stiched and stored in godown as 100 kg.

Welfare Measures

Family and bachelors quarters, canteen facilities, free medical aid, are provided for the employees. The medical aid is extended to the employees families and the canteen facilities to the cane growers. Free uniform and shoes are supplied for all the employees. Recreation club, schools, ITT are available for the children of the employees and cane growers. They are managed by the P.G.P.Education and welfare society. Departmental stores are run on a contract basis.

Employers Association

The South Indian Sugar Mills Association, Chennai and the Indian Sugar Mills Association, New Delhi are the two Employers Associations in the Industry.

Minerals and mineral based industries

Limestone, Kankar, Carnet and Ilmenite are available in large quantities in the district. M/s.India Cements Ltd., Sankar Nagar and Tamil Nadu Cements Corporation Ltd., unit at Alangulam in Virudhunagar district are mainly consuming limestone and Kankar available in the district for manufacturing cement. There are also private lessees for mining and utilising the limestone and Kankar for manufacturing cem powder and other allied time products. There were 41 mining leases for limestone and Kankar, and four leases for garnet granted by the Government in 1995. The royalty for limestone and Kankar is Rs.25/- per tonne, and for Garnet it is Rs.45/- per tonne. Minor minerals such as stone sand and earth (clay) are available in this district. There are a number of stone crushers, which use the stone for making jellies. There are also bricks and tiles industries which use earth for making bricks and tiles. One hundred and twenty eight lessees had been granted for quarrying stones, sand and earth (clay). Granites which are used for polishing are found in Sankarankoil. Ambasamudram , Sivagiri, V.K.Pudur, Tenkasi, Nanguneri and Radhapuram taluks.[22]

Talukwise details on mineral based industries, tile units, brick units, crushing units, gem factories are detailed below:

Sl. no.	*Taluk*	*Tile units*	*Chamber bricks*	*Country bricks*	*Crushing units*	*Gem factories*
1.	Tirunelveli	–	–	9	7	17
2.	Palayamkottai	–	–	17	8	1
3.	Sankarankoil	–	–	15	4	3
4.	Ambasamudram	14	–	15	3	1
5.	Nanguneri	–	5	14	2	2
6.	Radhapuram	8	2	21	3	–
7.	Tenkasi	4	2	3	2	1
8.	Shencottai	–	1	2	1	2
9.	V.K.Pudur	2	7	12	2	1
10.	Sivagiri	–	–	10	1	–

Handloom Industry

Handloom weaving is an ancient industry and it was flourishing till 1850 which caused no threat either to its workers or to the Government, except in times of natural calamities. The reasons were mainly due to employment of man power in the industry; machines and science were not known. It was the age in which the industry was not in any way dependant on mill-made yarn or foreign tools or foreign chemical dyes. Towards the close of the period, there came on the scene the East India Company, when the English, struck no less by the excellence of Madras Handloom fabrics than by the profits which they held out in European markets, exported year after year in ever increasing quantities all the best of Indian palambores, chintzes and Muslims to England. The demand for them became so great that in `1700 a law was passed in England by which all wrought silks, mixed stuffs and figured calicoes, the manufacturing of India, were forbidden to be worn or otherwise used in Great Britain.[23] This law, however, proved of little avail against the prodigious importation of cheap and attractive Indian piece-goods of that time.

From about the middle of the 19th Century, however, things began to change rapidly for the worse. It was then that machine and science sought to replace man and invention of spinning jenny, the powerloom and the chemical dyes dealt a serious blow to the handloom industry. And by 1900 Indian mills began to compete with English mills in producing yarn and cotton piece goods, exports of handloom cloth dwindled, import of mill made cloth increased, hand spun yarn gave place to English and Indian mill

made yarn, chemical dyes drove out indigenous dyes and European fashions, which came with European piece-goods, made grievous in roads into Indian homes. It was for these reasons that the prospects of the handloom industry became dark. The chief causes of the decline of the industry were the competition with mill industry and the collapse of the spinning industry. During the second half of the last century, no attempts to revise the handloom industry were made by the Government. The period between 1900 and 1934 was called a period of experiments. Several attempts were made by the Government to revive it, partly because of the insistence of public opinion during the Swadeshi and Swaraj movements, partly because of the serious conditions created by the First World War and the Economic Depression and partly also because of the increasing competition of the mill industry. All these attempts were made to improve the technical side of the industry, did little to improve the economic conditions.

The textile cottage industry which includes cotton, silk, kofra bleaching, dyeing, finishing, hosiery, lace embroidery, sericulture, silk reeling, silk twisting etc. It ranks in importance and magnitude next only to agriculture. It is the chief means of livelihood to people who entirely depend upon it. The chief classes among them were Kakkallayars, Pttasalayars and Pattunulkarars. A large number of Muslims, , Iluwars had weaving as their occupation. It affords work for men, women as well as children. Its importance is, therefore, beyond dispute. Only yarn up to and including 40^s was generally used by the handloom weavers in 1940^s. 51 per cent of the total consumption consisted of yarn up to and inclusive of 20^s. The remaining 49 per cent represented the consumption of yarn above 20^s. Art silk was consumed to a fairly large extent in Tirunelveli.[24] Cloths of various sizes and patterns were produced by handloom weavers. Important kinds of these were dhoties, angavasthrams, sarees, lungis, kailies, towels, bed-sheets, shirtings. Tirunelveli was one of the centres of production. As regards price, the mill-made cloths were cheaper than handloom cloths by 20 to 30 per cent. The handloom products were exported to all parts of this State and to other parts of the country.

There were dyeing units in weaving centres. In 1942, collective weaving centres were established primarily to expedite the orders for war textiles. Such centres were in the first instance organised in Tirunelveli among other selected districts. A Handloom Standard Cloth Scheme was introduced about the middle of 1943 to supply cheap cloth to the consumers. The Mill-made standard cloth was introduced into the market simultaneously. It was equally cheap and took the fancy of the public much more than Handloom Standard cloth under the Central Government Cotton Cloth and Yarn (Control) order of 1943 partly affected the sales of the Handloom Standard cloth. In September 1943 the Government therefore sanctioned a scheme for the licensing of merchants in all the districts, as

in the case of Mill-made Standard cloth, for the sale of Handloom Standard cloth. This gave impetus to the marketing of Handloom Standard cloth. The Control order exempted handloom goods to a considerable extent and, in consequence, the activity of the master weavers increased. They began to pay wages recklessly to the weavers to monopolise the production and trade in handloom cloth with the result that the looms working on Standard Handloom cloth began to drop off. The maximum wages were paid under the Handloom Standard cloth scheme but the short-sighted weavers did not hesitate to desert the collective weaving centres and weavers' co-op.societies and take up the more lucrative employment under the master weavers. Consequently demand for handloom cloth waned and it was decided to abandon the Handloom Standard cloth scheme in 1944.[25] The collective weaving centres, thereafter, were allowed to engage looms on normal varieties. Since the war, the handloom industry has passed through some ups and downs. It became imperative to undertake several measures to help the handloom industry.

In 1945, a post-war Development Scheme of handloom industry on a cooperative basis was formulated. This scheme aimed at increasing number of the weavers' societies, the establishment of dye factories to ensure adequate supply of coloured yarn to the weavers societies, production of new varieties to suit the tastes of the public and for giving training to weavers in the manufacture of improved varieties. It was to arrange for the supply of raw materials required by the societies and to render technical assistance to the societies. One Emporium was set up in Tirunelveli which took up the marketing of the finished goods of the societies.

A scheme for affording immediate relief to weavers through the agency of cooperative societies was implemented. It assured the weavers of a minimum wage and continuous employment and also relieved them from the burden of marketing cloth. This Relief scheme was extended to Tirunelveli district also and by the middle of 1950, these schemes were wound up. In 1950, District Handloom Boards under the Chairmanship of the Collector were constituted in the districts to the development of the handloom industry.

In the year 1953, the Cess Fund Schemes were implemented which opened a new era in the history of the handloom industry. The Khadi and other Handloom Industries Development Act 1953 was passed. In pursuance of this Act, an additional excise duty of 3 pies per yard on mill cloth was levied from 15th February 1953 for raising funds for the development of Khadi and handloom industries. Assistance from the Cess Fund was given as grants to subsidise their schemes e.g. to cushion price differences and to meet incidental expenses.

At this time some progress had been made in the cooperative movement. One project for establishing a cooperative Spinning Mills at Tirunelveli was mooted in 1953. A loan of rupees 10 lakhs was sanctioned to the State society for starting the South India Cooperative Spinning Mills at Tirunelveli for the supply of yarn at reasonable prices to the weavers in the cooperative fold. District Federations of Handloom Weavers and Directorate of Handlooms were formed in 1956 for the development of handloom industry. The distribution of looms in Tirunelveli district was more and almost all the looms weaved cotton cloth. In 1954-55, out of the 424784 active looms engaged in weaving cotton textiles, about 11 per cent were in the erstwhile Tirunelveli district.[26]

The Madras State Handloom Weavers' Cooperative Society opened depots and mobile vans were employed for doing intensive propaganda and selling handloom goods. Prizes were awarded for the best handloom goods produced, Pattern-making societies were opened at Tirunelveli to produce improved handloom fabrics both in utility varieties and exportable goods in different designs and weaving to cater to the changing public tastes. Pedal looms furnished heads, dobbies, jacquards and vertical warping machines were supplied through the State Society to the primary societies. Handloom weaving units have been concentrated in Palayamkottai, Veeravanallur, Kallidaikurichi, Tenkasi, Puliyankudi and Sankarankoil areas. In 1993 there were 12905 handlooms and 100 weavers cooperative societies with a working capital of Rs.433.16 lakh in the district.In 1998, there were 11770 handlooms and 53 weavers Cooperative Societies with a working capital of Rs.378.05 lakhs in the district.

In 1971, there were 7125 handlooms in Tenkasi taluk followed by Ambasamudram (6733), Sivagiri (4776), Sankarankoil (3878) Palayamkottai (3080), Tirunelveli (1368), Shencottai (825) and Nanguneri (691) taluks. The Handloom Census figures in 1987 showed a decreasing trend in all taluks. Ambasamudram taluk had 4444 handlooms, Tenkasi 4418, Sivagiri 2932, Sankarankoil 2787, Palayamkottai 1209, Nanguneri 592 and Tirunelveli 569. The decrease in the number of handlooms in 1987 was attributed to a shift from handloom to powerloom industry, change of profession due to meagre income in the handloom industry and migration of weavers to other parts of the State and country especially women folk after marriage and menfolk in search of good employment opportunities, death, etc.

Production and Sale of handloom cloth

In the year 1983-84, about 4706922 metres of handloom cloth were produced to the value of Rs.30163641. The total sales during that period was 4747587 metres to the value of Rs.37174561. The production gradually increased 5291744 metres in 1985-86. From 1986-87 to

1988-89, a marginal decrease in handloom production was witnessed touching 4357347 metres in 1988-89. In 1989-90, the production reached a new high of 5651738 metres and thereafter registering mixed trend. The sale of handloom stood Rs.37174561 in 1983-84 and it showed a mixed trend during the successive years and in 1991-92, it registered a maximum of Rs.6,22,20,263. In the year 1992-93, 4976789 metres of handloom cloth were produced to the value of Rs.52,400,717. The total sales during that period was 7030089 metres to the value of Rs.52,400,717. The total sales during that period was 7030089 metres to the value of rs.55719689. The production decreased to 3632810 metres in 1993-94. From 1993-94 to 1997-98 a marginal decrease in handloom production was witnessed touching 1852432 metres in 1997-98. The sale of handloom stood Rs.50826285 in 1993-94 and it should a decrease trend during the successive years and in 1997-98, it registered a sale of rs.50826285.The comparative statement of handloom census figures between 1971 and 1987 and production and sales of handlooms from 1983-84 to 1992-93[27] are tabled below:

Comparative statement of handloom census figures between 1971and 1987.

Sl. no.	*Taluk*	*1971 Census*	*1987 Census*	*Difference*
1.	*2.*	*3.*	*4.*	*5.*
1.	Sankarankoil	3878	2787	(-) 1091
2.	Nanguneri	691	592	89
3.	Shencottai	825	389	644
4.	Tenkasi	7125	4418	2707
5.	Sivagiri	4776	2932	1704
6.	Ambasamudram	6733	4444	2289
7.	Tirunelveli	1368	569	799
8.	Palayamkottai	3080	1209	1871

Production and Sales of handlooms from 1983-84 to 1992-93

Year	*Production*		*Sales*	
	Metre	*Value* (in Rs.)	*Metre*	*Value* (In Rs.)
1983-84	47,06,922	3,01,63,641	47,47,584	3,71,74,561
1984-85	50,00,272	3,75,43,491	50,81,451	4,23,50,146
1985-86	52,91,744	3,99,45,981	50,74,605	4,31,81,525
1986-87	51,59,322	4,08,85,214	49,12,414	4,28,19,595

Year	Production		Sales	
	Metre	Value (in Rs.)	Metre	Value (In Rs.)
1987-88	44,85,774	3,18,54,127	47,07,227	3,98,48,730
1988-89	43,57,347	4,25,25,471	48,99,363	4,56,12,333
1989-90	56,51,738	4,53,11,712	62,31,535	5,78,24,722
1990-91	55,27,959	4,85,52,570	42,52,075	4,58,80,936
1991-92	43,91,498	4,64,60,115	52,02,887	6,22,20,263
1992-93	49,76,789	5,24,00,717	70,30,089	5,57,19,689
1993-94	36,32,810	2,32,80,346	33,88,419	5,08,26,285
1994-95	30,40,269	3,74,36,111	30,23,421	4,83,74,736
1995-96	26,31,418	3,72,86,126	26,43,326	5,01,46,268
1996-97	20,57,316	3,44,39,206	20,24,311	3,71,78,631
1997-98	18,52,432	3,00,66,102	16,95,536	3,21,62,047

The particulars regarding the yarn and Khadi production from the years 1984-85 to 1993-94 are given in *Appendix-1*.

State and Central Governments have implemented welfare schemes to the weavers members as well as weavers co-operative societies. Weavers savings and security scheme, weavers family pension scheme, Weavers old age pension scheme, weavers House-*cum*-workshed scheme, project package scheme, Health package scheme are the scheme in which the weavers are directly benefited. Modernisation of showrooms under Market Development Assistance scheme (MDA), setting up of Handloom Development Centres (HDC), and quality Dyeing Units (QDU), Rebate subsidy on sale of handloom cloth scheme, and Interest subsidy on working capital loan scheme are the schemes in which the weavers co-operative soceities are directly availing the financial assistances of the Government by which effective and extensive services are rendered to the weaver members of the societies.

Health package scheme

Government of India have introduced Health package scheme for Handloom weavers from 1992-93. This scheme intends to ameliorate some of the health problems related to the profession of Handloom weaving. The packages have following components. 1. Re-imbursement of cost of medicines and treatment of disease T.B, Ashtma, 2) Re-imbursement of cost of testing of eyes and cost of spectacles 3) supply of drinking water, 4) Financial assistance for women members up to two child birth, and family planning.

Weavers Savings and Security scheme

Members of weavers co-operative societies who have worked for continuous period of three years are eligible for admission into this scheme. Under this scheme eight per cent of wages earned by member is recovered as member contribution. Central and State Governments contribute four per cent each as subsidy and deposited in the Government account on the total deposits seven per cent interest is also credited by State Government. If a member working under the scheme expired below 60 years of age his nominee will be paid a sum of Rs.40,000/- as insurance amount along with the total deposits on his accounts and Rs.8000/- by co-optex. There are 2125 members working under this scheme in Tirunelveli circle with a total deposit of Rs.130 lakhs.

Weavers family Pension scheme

Members of weavers co-operative societies who have worked continuously for a period of five years are eligible for admission into the scheme. Member contribution at the rate of Rs.2/- per month is recovered and remitted to Government account. If a member expired below 60 years of age his legal heir will be paid a family pension of Rs.250/- per month for a period of ten years. Under this scheme 480 weavers in Tirunelveli District have been enrolled.

Old Age Pension scheme

Members of weavers cooperative societies who have worked as members in the weavers savings and security scheme are eligible for admission into the scheme on attaining the age of 60 years. Under this scheme Rs.150/- is paid per month as old age pension. In Tirunelveli District 105 weavers had been admitted and they were availing the benefit of old age pension.

HEALTH PACKAGE SCHEME

Medical Assistance.

Year	*Physical*	*Financial*
		(Rs.)
1994-95	119	68630
1995-96	–	–
1997-98	49	11000
Borewell Assistance		
1996-97	–	–
1997-98	200	175000
1998-99	200	70000

Weavers House - *cum* - workshed scheme

Year	*Physical*	*Financial*
1995-96	39	17,31,250
1996-97	12	6,12,000
1997-98	14	3,22,000

Modernisation of showroom under market development Assistance scheme

Year	*Physical*	*Financial*
1993-94	1	3,40,000
1994-95	1	1,10,000
1995-96	N.A.	N.A.
1996-97	N.A.	N.A.
1997-98	1	8,00,000

Handlom development Centre and Quality Dyeing Unit scheme

Year	*Physical*	*Financial*
1993-94	2	17,52,000
1994-95	2	9,62,000
1995-96	N.A.	N.A.
1996-97	N.A.	N.A.
1997-98	1	1,95,000

Project package scheme

Under this scheme financial assistance is given for weavers for training in improved methods of weaving, for purchase of new looms, and accessories for construction of workshed and for electrification. Details of assistance given to Tirunelveli district is given below:

Year	*Physical*	*Financial*
1994-95	70	717000
1994-95 (additional)	40	377920
1995-96	208	2083775
1996-97	26	354000
1997-98	39	135790

Schemes such as Share Capital loan, State participation modernisation looms, etc., are implemented to strengthen capital structure to bring more looms under cooperative fold and modernisation of existing looms.

1. **Share Capital Loan**

Share capital loan assistance is given for the purpose of strengthening the share capital structure of the existing weavers and also to bring new weavers into cooperative fold.

Yearwise- physical and financial achievement between 1985-86 and 1992-93:

Year	*Physical*	*Financial*
1985-86	427	63935
1986-87	1635	252170
1987-88	660	100000
1988-89	218	33255
1989-90	334	55500
1990-91	N.A.	N.A.
1991-92	226	35325
1992-93	201	30400

2. **State Participation**

State Government invest certain amount in Weavers Cooperative Societies by way of shares and strengthen the share capital structure of the society.

Yearwise physical and financial achievement from 1985-86 to 1992-93 :

Sl. no.	*Year*	*Physical*	*Financial*
1.	1985-86	5	170002.
2.	1986-87	6	132000
3.	1987-88	N.A.	N.A.
4.	1988-89	11	224800
5.	1989-90	13	130000
6.	1990-91	14	190000
7.	1991-92	–	–
8.	1992-93	17	215000

Modernisation of Looms

The Tirunelveli District Handloom Weavers' Cooperative Federation was started on 20 July 1956 to coordinate the activities of the weavers societies and it is to regulate yarn supply and arrange for marketing of goods produced by primary weavers societies. There were ninety one weavers societies in the district in the year 1956. Melapalayam weavers cooperative society was the first society started in 1936 in the district.

Physical and Financial Achievement From 1985-86 to 1992-93

Year	*Physical*	*Financial*
1985-86	90	100000
1986-87	15	31340
1987-88	255	45000
1988-89	N.A.	N.A.
1989-90	60	90000
1990-91	N.A.	N.A.
1991-92	116	67400
1992-93	83	137450

Industrial Co-operative Societies

Tirunelveli cooperative timber works for Ex-servicemen started on its work on 12 May 1947 for the resettlement of the demoblised personnel of the Second World War. The cooperative Timber Works was reorganised in January 1948 by installing labour saving wood working machinery, log band saw, remodelling of buildings etc. The Vaniga Vaisiya Kalchekku Nallennai Urpathiyalar Cooperative Production and Sales Society Ltd., was started at Pettai. It was engaged in the Oil extraction from gingelly seeds and supplied oil in the neighbouring areas.

The Tirunelveli Weaver's Cooperative Production and Sales Society Ltd.

The Tirunelveli Weaver's Cooperative Production and Sales Society Limited was established on 14 December 1941 in Tirunelveli with a membership of 50 per cent The total membership in 1990 was 217, which increased to 332 to 1993. In 1994, the Society had 337 ,members. The society had a share capital of Rs.1,38,333/- in 1990, Rs.1,36,068/- in 1992; Rs.1,32,698/- in 1993 and Rs.1,27,613/- in 1994.In 1998, the society had 148 members. The society had a share capital of Rs.152423 in 1996; Rs.129467 in 1997 and Rs.187217 in 1998.[28]

PRODUCTION AND SALES FROM 1990 TO 1998

Production

Year	*Metre*	*Value* (in Rs.)
1990	99469	716404
1991	92548	727231
1992	100127	805508
1993	84854	770123
1994	29490	702539
1995	58928	598887
1996	55522	576532
1997	41926	487685
1998	41770	510966

Sales

Year	*Metre*	*Value* (Rs.)
1990	123624	930659
1991	87796	789299
1992	101078	966265
1993	76953	836211
1994	76915	771131
1995	56233	709665
1996	73704	917066
1997	39527	535366
1998	41880	603542

The Kallidaikurichi Weavers' Cooperative Production and Sales Society Ltd.

The Kallidaikurichi Weavers Cooperative Production and Sales Society Ltd., was established in the year 1938 at Kallidaikurichi. In 1989-90, the society had 876 members. The membership decreased to 812 in 1993-94. The share capital in 1991-92 was Rs.349169/- and Rs.347462/- in 1993-94. Membership in 1997-98 was 577 and the share capital was Rs.369703 in 1997-98. The society is manufacturing bed-sheets, pillow covers and white towels. colour towels, lungies and dhoties, single and double threads towels, colour kattam madi, etc.[29]

PRODUCTION AND SALES

Production

Year	*Metre*	*Value*(in Rs.)
1989-90	266162	2633901
1990-91	209206	3227972
1991-92	389801	5038735
1992-93	309045	4175332
1993-94	331459	4622847
1994-95	348295	6494042
1995-96	346376	6875696
1996-97	332767	6059775
1997-98	304458	5768615

Sales

Year	*Metre*	*Value (in Rs.)*
1989-90	352654	5123555
1990-91	290746	4195537
1991-92	355805	4007977
1992-93	361686	6365363
1993-94	368264	6481417
1994-95	296207	6199905
1995-96	345417	6044088
1996-97	293921	6841930
1997-98	205534	5745621

Valliammalpuram Industrial Weavers Cooperative Production and Sales Society

The Valliammalpuram Industrial Weavers Cooperative production and sales society was started in the year 1982 at Valliyoor. In 1990, there were 224 members which increased to 229 in 1993 and the membership decreased to 227 in 1994. Total membership in 1998 was 217 and total share capital in 1998 was Rs.107467.The total share capital in 1992 was Rs.104887/-, Rs.103612 and Rs.100412 in 1993 and 1994 respectively. Sarees, dhoties, polyester are manufactured.[30]

The Sankarankovil Small Match Producers' Service Industrial Cooperative Society Ltd.[31]

The Sankarankovil Small Match producers' Service Industrial Cooperative Society Ltd., was started in the year 1989-90 with a membership of 39. The membership increased to 41 in 1990-91 and it was marginally reduced to 40 in 1991-92; 39 in 1992-93 and 38 in 1993-94. The share capital in 1989-90 was Rs.312000/-; Rs.328000/- in 1990-91; Rs.347000/- in 1991-92; Rs.355500/- in 1992-93 and Rs.328500/- in 1993-94.

PRODUCTION AND SALES OF BUNDLES

Production

Year	*Production of bundles*	*Value* (in Rs.)
1989-90	47457	3150492
1990-91	44935	2854760
1991-92	61961	4431006
1992-93	69172	5533760
1993-94	67227	5399531

Sale of Bundles

Year	*Sale*	*Value* (in Rs.)
1989-90	43560	3314161
1990-91	50568	3758988
1991-92	61294	5278706
1992-93	65746	6141517
1993-94	71135	6543102

The share of the Government of Tamil Nadu is Rs.125000/- and share capital loan of Tamil Nadu Government is Rs.100000/- and cash credit loan from the Tamilnadu Industrial Cooperative Bank Ltd., is Rs.450000/-.

Thenpothai Potter's Cooperative Cottage Industrial Society Ltd.[32]

Thenpothai Potter's Co-operative Cottage Industrial Society Ltd. was started functioning from 15th December 1947 at Thenpothai in Tenkasi taluk. The Society had 102 members in 1990, 105 in 1991 and 103 in 1994 and its share capital was Rs.86,124/- in 1992. The amount of share capital in 1994 was Rs.81,884/- Jars and toys in different varieties (i.e)

red and glaze pottery articles are manufactured in the society. The finished products are marketed through the Khadi crafts, Sarvodaya sangh and to the private parties. Tamilnadu Khadi and Village Industries Board is providing financial assistance to the society.

The Urkad Tiles and Brick Workers Industrial Cooperative Society Ltd.

The Urkad Tiles and Brick Workers Industrial Cooperative Society was started functioning from 25th July 1956 at Ambasamudram. The society is under the control of the State department of Industries and Commerce. The membership of the society in 1990 was 53; it was 63 in 1992 and 152 in 1993. The share capital in 1992 was Rs.53,464/- and it increased to Rs.59985/- in 1994. Roofing tiles, flooring tiles, ridge tiles, chimney tiles and Gunlay bricks are manufactured in the society. The society provide employment to about 56 persons in 1995.[33]

Karukurichi Potters Cooperative Cottage Industrial Society Ltd.

Karukurichi Potters Cooperative cottage Industrial Society Ltd., was set up in the year 1955 with an initial membership of 30. The society is functioning at Karukurichi near Cheranmahadevi in Ambasamudram taluk. The society had 94 members in 1993-94 Fine mud products such as water pot, hundi, mud fridge for storing vegetables, mud tub and other varieties are made in the society. Raw material viz., fine, nice mud is available in the Thiruviruthuanpulli village. The finished products find good market within the district and also in the neighbouring States. The total sales amounted to Rs.9957.30p. in 1955-56 and the amount increased to Rs.10,89,736/- in 1993-94.[34]

Power looms

There are three powerlooms weavers cooperative societies in the district which are located at Sankarankovil, Veeravanallur and Melapalayam.The Sankarankovil Powerloom Weavers Cooperative Society had 90 looms with a membership of 107. The society produced 2071240 metres of cloth worth Rs.7042948 during the year 1991-92. The total sales during that period was 2184373 metres of cloth to the value of Rs.7634896. The Veeravanallur Powerloom Weavers Cooperative Society had 110 ,members with a loom strength of 49. The production of cloth during 1991-92 was 377370 metres which was valued at Rs.1283060 and total sales was 318109 metres valued at Rs.1110208.The Melapalayam Weavers cooperative society having 112 members had 49 looms.

Khadi and Village Industries

The Khadi and Village Industries Commission has implemented programmes for the development of hand spinning and hand weaving,

carpentry and blacksmithy, manufacture of methane gas from cow-dung, hand made paper, pottery, processing of cereals and pulses, flaying, cottage and footwear manufacture and hand sari etc. Hand-spinning has been in existence in the district for several centuries and this was done mainly by women.[35] It was largely a subsidiary occupation, except where the spinners had no other source of income. The raw material required was cotton. The spinners either grow their own cotton or bought it.

Village Industries

The Village industries taken up for development with the financial assistance granted by the Khadi and Village Industries Commission and Tamil Nadu Khadi and Village Industries Board are:-1. village oil industry, 2.hand pounding, 3.village tanning and allied industries, 4.village pottery including brick manufacture, 5.bee-keeping, 6.soap-making from non-edible oils, 7.hand-made paper, 8.production of gur and khandasari sugar, 9.cottage type match factories, 10.ginning of cotton, 11.palmgur Industry, 12,ambar charkhas. The programme of village industries was undertaken both departmentally and through the organised industrial cooperatives. The erstwhile Madras Government took up the khadi scheme with the main objectives of eradication of unemployment in the villages, supplementing the income of the agricultural villages by spinning during leisure hours and thirdly desiring to see that the villagers find self-sufficiency and self reliance in their cloth requirement. Therefore, in 1947 the Madras Government incorporated Khadi production as an integral part of Firka Development Programme. With the rapid expansion of the Khadi schemes and the advent of the Ambar Charkha, the Khadi programme took a new phase. In 1956 the Department of Khadi was created to cope with the expanding Khadi programme. Subsequently, the Tamil Nadu Khadi and Village Industries Board was constituted under the Tamil Nadu Khadi and Village Industries Board Act 1959 and it started functioning with effect from 1st April 1960, to implement the Khadi and Village Industries programme.

After the formation of the Board the Department of the Khadi and Village Industries wing of the Industries Department was transferred to the control of the Board with effect from 15 September 1960. The Board aims at planning, promoting, organising and implementing the Khadi and Village industries in rural areas in coordination with other agencies engaged in rural development work. It aims at promoting employment, producing saleable articles using local resources and creating self reliance among the people. In order to expand employment in rural areas, the Government of India have enlarged the list of village industries from 26 to 96 in April 1992. The Board is implementing various schemes through its own units, individual cooperatives and by extending financial assistance to the individual artisan enabling them to start their own units.[36]

Besides the original intensive Khadi scheme, the whole State has been brought under four other Khadi schemes viz., extensive khadi schemes in non-block areas and in National Extension Service and reverted National Extension Service block, comprehensive khadi scheme (in community development blocks, and Ambar charkha programme. These schemes have been further expanded after the formation of the Khadi Department to reach every corner of each district. The Tamil Nadu Sarvodaya Sangh, and similar institutions, help the development of Khadi in Tamil Nadu.

The credit for inventing Ambar charkha goes to one Ekambaranathan of Tirunelveli District in the year 1956. The advantage of the Ambar charkha over the Kisan Charkha which was also in vogue in Tirunelveli district then, is that the former could produce more yarn, almost three times than the latter. Ambar charkha training centres were functioning at Melapalayam, Valliyoor, Thachanallur and Cheranmahadevi. During the year 1958-59, one Ambar Vidyalaya at Manimuthar and one model weaving centre at Kilapavoor were functioning. Weavers were trained in Khadi weaving with Ambar yarn in the model weaving centre. The Ambar Charkha programme of renovation of old model Ambar Charkhas into six spindles. Charkhas was done in the year 1964-65. During the year 1964-65, a sales depot was opened at Nanguneri. A new model Ambar charkha evolved during 1965 and the Khadi Commission also permitted the use of power for carding purposes with the introduction of 1965 model charkhas. Rural textiles centres were started to produce finer varieties of Khadi. At the departmental level, decentralisation was effected during the year 1966-67, on a functional as well as territorial basis. The State was divided into development districts with one Khadi and Village Officer in charge of each district. The control of the Khadi and Village Industries Board is vested in Chief Executive Officer at the State level.

Tamil Nadu Sarvodaya Sangh

The Akil Bharat Charkha Sangh (All India Spinners' Association) started by Mahatma Gandhi in the 1920's later became the Akil Bharat Sarva Seva Sangh and has now been named as Tamil Nadu Sarvodaya Sangh. The Tamil Nadu Sarvodaya Sangh was formed as a registered Institution on the 3rd April 1958. It took over all the activities of the Tamil Nadu Branch of the Akil Bharat Sarva Seva Sangh from 1 May 1958. The Ambar Charkha Programme also under the Tamil Nadu Sarvodaya Sangh was making steady progress.

Under the policy of the Khadi and Village Industries Commission, Bombay, the Ambar Charkha Programme was linked with the Naya Morh Programme which contemplated the introduction of Khadi and Village Industries schemes only in areas where there was need and where there was guarantee of consumption of the products of the schemes. The Tamil

Nadu State Khadi and Village Industries Board had appointed a Committee called the "Naya Morh" Committee for the implementation of the Integrated Development Programme. There are 26 Khadi Spinning units engaged in the manufacture of cotton yarn and polyester yarn, seven khadi weaving units engaged in the production of cotton Khadi and polyester Khadi.

The Khadi and village Industries products are sold through nine Khadi Crafts and footwears through two footwear sales emporia. Six village industries units are engaged in the production of soap, handmade paper, pottery, leather, honey etc., and 64 cooperative working societies covering a range of oil, pottery, footwear, handmade paper, cane and bamboo, lime, mat, carpentry and blacksmithy, multipurpose, bricks manufacture, tailoring, book binding, printing, palm leaf etc.

During 1993-94, a quantity of 13 lakh nos. yarn to the value of Rs.40.28 lakhs was produced and the production in 1994-95 increased to 13.93 lakh nos. which was to the value of Rs.41.79 lakh. The Khadi production during 1993-94 and 1994-95 was 3.40 lakh metres worth Rs.140 lakh and 3.72 lakh metres to the value of Rs.167.40 lakh respectively khadi and village industries provided employment to 895 and 925 persons in 1993-94 and 1994-95 respectively.

Khadi and Village industries aim to improve the standard of living of people who are living below the poverty line by providing employment opportunities and by tapping the local natural and human resources. Khadi industries provide employment to weaving communities and village industries employ in their units people both in rural and urban areas. There are 32 khadi spinning units, seven khadi production units and nine Khadi sales centres functioning in the district. About 25 women are employed in a Khadi spinning unit and a member earns wage up to Rs.30/- per day. About 800 poor rural women are employed in the Khadi spinning units in the district. The total yarn production was 15.76 lakh metre and 13.54 lakh metre during the years 1994-95 and 1995-96 respectively and a sum of Rs.11.60 lakh and Rs.10.20 lakh was disbursed as wages during that period. Khadi is produced in Valliyoor, Keelapavoor, Kurivikulam, Sambavar Vadakarai, Kadayanallur, Veravanallur and Puliyankudi sub centres. Khadi sales centres are at Tirunelveli, Palayamkottai, Nanguneri, Kallidaikurichi, Tenkasi, Courtallam, Sankarankoil, Ambasamudram and Kadayanallur. There is a footwear sales centres at Tirunelveli.

Village industries such as soap unit at Sankarankoil, footwear unit at Palayamkottai, Chrome leather tannery at Sankarankoil, Pottery unit at Karukurichi, hand paper making unit at Athiyuthu, footwear sales centre at Tirunelveli are functioining in the district. About fifty families are benefited through the production units. There are 46 industrial coop.societies comprising lime unit, oil, bamboos and rattan, carpentry and blacksmithy,

bricks, multipurpose societies, leather, hand made paper, mats, palmyra fibre, printing and pottery in the district. Dyeing factories are located at Sankarankoil and Ambasamudram. The khadi krafts and khadi sub centres functioning in the district aren given below:

Sl. no.	Name of the Khadi unit	Year of establishment	
1.	Khadi kraft,	Tirunelveli junction	1967
2.	Khadi kraft ,	Palayamcottai	1962
3.	"	Nanguneri	1964
4.	"	Kallidaikurichi	1966
5.	"	Ambasamudram	1994
6.	"	Tenkasi	1964
7.	"	Courtallam	1960
8.	"	Kadayanallur	1994
9.	"	Sankarankoil	1964
10.	"	Valliyur	
11.	Khadi Sub, centre	Valliyur	1959
12.	"	Veeravanallur	1960
13.	"	Keelapavoor	1962
14.	"	S.V.Karai	1963
15.	"	Kadayanallur	1961
16.	"	Pullangudi	1960
17.	"	Kuruvikulam	1961

Village Industries Units

Six village industries units functioning in the district are given below:

Sl. no.	Village Industries	Year of establishment	Items of manufacture	Employment
1.	Footwear Unit, Palayamkottai	1972	Shoes, Cheppals and other foot-wear.	15
2.	Chrome Tannery Sankarankoil	1975	Tanned buff hides & servicing.	3

3.	Soap Unit, Sankarankoil	1958	Laundry, toilet, carbolic liquid and soft soap.	5
4.	Common facility Centre, Pottery unit, Karukurichi	1987	Flower pots, jars, clay pipes, water pots, bricks and flooring tiles.	10
5.	Handmade paper, Athiyuthu	1972	Card boards, wrapper writing paper, file pad. (Kalunurkulam, V.K.Pudur)	15
6.	Honey packing centre, Viswanathapuram.	1987	Honey packing jams, fruit juices.	1

List of Villages Industries Societies

Sl.no.	*Name of Society*	*Date of starting.*
1.	Vadakkankulam Multipurpose Cooperative Society.	9 October 1987
2.	Valliyoor Multipurpose Coop. Society.	9 October 1988
3.	Ullar Thalayanai Kottai Multi-purpose coop-society.	18 October 1987.
4.	Devipattinam Brick coop.society	9 January 1988
5.	Veerasigamani Mat.coop. society	14 October 1988
6.	Thuppakudi Kongani Thattu Coop.society.	10 November 1987
7.	Vijaya Achampadu Multipurpose cooperative society.	18 October 1987.
8.	Bharathipuram Ethai coop.society	5 February 1988
9.	Pillaiyarkudiyirupu lime coop. society.	9 January 1988
10.	Tenkasi Aluminium Producers coop.society.	5 February 1988

11.	Shencottai Saw Mill coop.society	9 February 1988
12.	Chockampatti Handmade paper coop.society.	29 November 1987
13.	Tenkasi Brick coop.society	9 October 1987

Khadi production units are functioning at Valliyoor, Veeravanallur, Keelapavoor, Vadakarai, Kadayanallur, Puliyankudi and Kurivikulam. Khadi sales centres are functioning at Tirunelveli junction, Palayamkottai, Nanguneri, Kallidaikurichi, Tenkasi, Courtallam and Sankarankoil.

Khadi Sales between 1984-85 and 1993-94

Sl. no.	*Year*	*Metres* (in lakhs)	*Value* (Rs. in lakhs)
1.	1984-85	4.80	47.90
2.	1985-86	3.90	48.20
3.	1986-87	4.90	49.20
4.	1987-88	5.00	50.12
5.	1988-89	6.00	60.16
6.	1989-90	5.40	54.87
7.	1990-91	5.30	53.40
8.	1991-92	6.00	60.50
9.	1992-93	6.90	70.41
10.	1993-94	7.30	74.18

Sale of Village Industries Products from 1984-85 to 1993-94

Sl. no.	*year* *Industrial products.*	*Sale of village* (Rs.in lakhs)	*Wages paid*
1.	1984-85	16.40	1.68
2.	1985-86	17.60	1.68
3.	1986-87	18.80	1.71
4.	1987-88	19.60	1.74
5.	1988-89	20.00	1.80
6.	1989-90	21.10	1.84
7.	1990-91	22.05	1.96
8.	1991-92	24.00	2.31
9.	1992-93	26.20	2.90
10.	1993-94	27.20	3.10

Village Industries Products sold in Khadi Units (From 1984-85 to 1993-94)

Sl. no.	*year*	*Sales* (Rs. in lakhs)
1.	1984-85	10.00
2.	1985-86	10.10
3.	1986-87	11.20
4.	1987-88	13.70
5.	1988-89	14.60
6.	1989-90	16.50
7.	1990-91	17.40
8.	1991-92	18.30
9.	1992-93	19.40
10.	1993-94	23.10

Khadi Spinning Units

1.	Panakudi	
2.	Ervadi -	2 units
3.	Tenkasi -	2 units
4.	Marudhakulam	2 units
5.	Ramanthapuram	
6.	Ureni Azhagiyan	
7.	Parappadi	
8.	Perumalpatti	2 units
9.	Sankaralingapuram-	3 units
10.	Puliyankudi -	2 units
11.	Aikudi	
12.	Shenkotai	
13.	Sivagiri	
14.	Pakgopuram	
15.	Vayali	
16.	Paruthippadu	
17.	Kallathi	
18.	Unnankulam	
19.	Arampandankulam	
20.	Ariyakulam	

21. Moolakkaraipati
22. Anumar Pudukkulam
23. Kadazhapallam

Village Industries Cooperative Societies

Pottery cooperative society

1. Nellai Pottery producers cooperative society
2. Perumkulam pottery "
3. Shencottai "
4. Kurichi "
5. Sevalapari "
6. Alwarkurichi "
7. Mavadi "
8. T.Karunkujlam "
9. Kunduvankulam "
10. Kattalaikudiyiruppu "
11. Chokkalingapuram "
12. Keelnatham "
13. Andipatti "
14. Thatchanallur "
15. Adaichani "
16. Subramaniyapuram "
17. Vavanagaram "
18. Thenpothai "
19. Elanji "
20. Tenkasi "
21. Surandai "
22. Keelapavoor "
23. Sundarapandiyapuram "
24. Karukurichi "
25. Pazhavur "

Limestone Industrial Cooperative Society

1. Adyankarunkulam Limestone Industrial Coop.society.
2. Puliyankudi "
3. Ahyikudi "
4. Pillaiyar Kudiyiruppu at Radhapuram "
5. Sayamalai Limestone Industrial production coop.society.

Oil Industry

1. Pettai oil Industrial coop.society.
2. Valliyoor oil Industrial coop.society.

Cane and Bamboo industrial coop.society.

1. Shencottai
2. Koikulam

Carpentry and Blacksmithy Industrial coop.society.

1. Chidambarapuram
2. Thatchanallur
3. Rajagopalapuram
4. Meenavankulam
5. Elanji
6. Tenkasi
7. Kadayanalur

Bricks Industrial coop.society.

1. Sankarankoil
2. Vadakkukamkurichi
3. Devipatinam
4. Tenkasi
5. Ayikudi
6. Vadanathampatti

Pulses and foodgrains societies

1. Melakadayanallur
2. Kallidaikurichi papad (Appalam)Manufacturers Industrial coop. society.

3. Vadakkankulam Multipurpose Industrial coop.society.
4. Valliyoor "
5. Vijaya Achampadu "
6. Vadakku Therkku Thalaiyanai "

Tannery Industries

1. Nellai Tannery workers coop.society
2. Sankarankoil Tannery workers coop.society

Handpaper made coop.society

1. Parappadi Handpaper made Industrial coop.society
2. Brahmadesam Handpaper coop.society

Aluminium coop.society

1. Tenkasi Aluminia Producers industrial society

Mat and Fibre products Industrial coop.society

1. Pathamadai
2. Veeravanallur
3. Kiriyammanpuram
4. Ervadi
5. Veerasigamani
6. Bhagavathiyapuram Ethai
7. Vallam Ethal

Beads garland

1. Narasinganallur Beads Garland Producers coop.society

Saw Mill

Shencottai Saw Mill owners cooperative society

Thuppakkudi Konkanithattu Producers coop. society

Palmyra Industry

1. Pambukoil Market Palmleaf producers coop.society
2. Annai Indira Palm fibre producers coop.society
3. Sankarankoil Palm fibre producers coop.society
4. Sivagiri Palm fibre producers coop.society

5. Puliyamkudi palm fibre basket makers coop.society
6. Vadakku Sivakamipuram basket Makers coop.society

Book Binding and Printing

1. Theagarayanagar Handicapped Sewing and Bookbinding coop.society.
2. Sangunar Stationery Maker printing coop.society

Sericulture

Sericulture is an agro based, labour intensive cottage industry which is a synthesis of three different activities namely cultivation of mulberry, rearing of silkworms and reeling of cocoons. While the first two activities are agricultural in character, reeling of cocoons is industrial in nature. Mulberry is a quick growing plant, the leaves of which can be harvested several times in a year. As mulberry constitutes the only satisfactory food of the silkworms, the quality of mulberry leaf has a direct bearing on the development of the worm and the quality of cocoon. [37]

Sericulture has been proved to be a promising industry in the district. Liberal assistance programme by the Department of Sericulture and supply of hybrid variety mulberry seed cuttings at subsidised cost has accelerated the development of this industry. The areas in and around Tenkasi, Ambasamudram, Shencottai, Kadayam, Kadayanallur, Puliyankudi, Sankarankoil and Kurivikulam have registered increased activities in this field. Sericulture programmes such as expansion of mulberry cultivation, imparting technical training to farmers on sericulture activities construction of rearing sheds, silk reeling and twisting works are implemented in these areas.

The Government Silk farm, Courtallam, was started as early as in 1958. In 1966, there were only 11 acres under mulberry cultivation. and the area increased to 900 acres in the year 1982-83. Cocoon production touched 15547 kg. in the district and Government units produced 852 kg of silk during 1982-83.

Area under mulberry during 1995-96 was 650 acres and in 1996-97, it was 553.95 acres and there were 1128 farmers engaged in sericulture activities. Most of the farmers are marginal and small farmers. Of the 857 acres under mulberry 650 acres with 1125 farmers were doing sericulture till March, 1996 and another 207 acres have been brought under mulberry by 384 farmers up to February 97. During 1996-97 February, a quantity of 0.692 lakh layings were distributed to the sericulturists and a total of 30980kg. of cocoons worth Rs.30.98 lakh have been produced.

Government Silk Farm, Shencottai (P1 seed farm)

The total area of the Govt. Silk farm is 41.2 acres. Of which the area under mulberry is six acres. The farm produces local seed cocoons and the products are distributed to Government breed grainage, Courtallam, Dindigul and Tiruchirappalli, etc. During the year 1996-97, 10.04 lakh number of seed cocoon were produced and issued to the grainages for commercial seed production.

Government Silk Farm, Boganallur

The farm was established under Western Ghat Development programme with two acres under mulberry. This model silk farm produces cocoons, imparts training to the new sericulturists, produces and distributes mulberry seed materials to the farmers. During 1996-97, a quantity of 214 disease free layings were reared and 53.600 kg. of cocoons were produced.

Demonstration-*cum*-Training centre, Tirunelveli

The area under mulberry in the demonstration centre is one acre. It is acting as a Demonstration-*cum*-Training centre to the new sericulturists as well as school and college students. During 1996-97, a quantity of 752 disease free layings were reared and 205.000kg. of cocoons were produced.

Cross Breed Grainage, Courtallam

The main objective of the grainage is to meet out the requirements of disease free layings to the farmers of Tirunelveli Thoothukkudi and Kanniyakumari districts. It is distributing the seeds to Virudhunagar, Ramanathapuram, Sivagangai and Madurai districts. During the year 1996-97, a quantity of 1,61,506 DFls. were produced and distributed to the sericulturists. Government Cocoon market, Government Silk realing unit, rural reeling training centre and farmers training centre are functioning at Nannagaram. Their activities are as under.

Government Cocoon Market, Nannagaram

Nannagaram is a market centre for selling the cocoons produced by sericulturists as well as Government farms. In 1996-97, a quantity of 27207 kg. of cocoons to the value of Rs27,20,700/- was transacted by the market. The transacted cocoons were purchased by private silk reelers as well as Government reeling unit, Nannagaram to convert the cocoons as silk.

Government Silk Reeling Unit

The silk reeling unit at Nannagaram which has six cottage basins, each with a capacity to produce 4.8 kg. of raw silk per day. During

1996-97, a quantity of 983 kg. of raw silk was produced to the value of Rs 9,83,000/-. The silk produced by the unit was sold to Anna Silk exchange, Kancheepuram.

Rural Reeling Training Centre

This centre has been established to impart silk reeling training to village youths so that they could get employment opportunities in silk reeling industry. During 1996-97, about 20 persons underwent training under National Sericulture project (NSP) which was implemented in the district from the year 1994-95.

Farmers Training Centre

The farmers training centre is the centre of training of new technology set up in 1994-95 under the National Sericulture project. It imparts new technologies to sericulturists both mulberry cultivation and silkworm rearing. During 1995-96, 150 farmers have been given training with the stipend of Rs.500/- each.

Tirunelveli District Sericulturists Society

The Tirunelveli district silk farmers and silk reelers industrial cooperative society was organised during the year 1979 and has been functioning since then, to meet the requirements of the sericulturists and supplies silk worm rearing materials. The society has been making an annual sales turnover of about Rs.3 lakhs per year and has been endeavouring for the development of, 'on farm' activities of sericulture in that area. Under the National Sericulture Project an extent of 140 acres has been planted under mulberry by 245 farmers. About 48 farmers were given training with a stipend of Rs.500/- to each and a sum of Rs.24,000/- was spent as stipend amount.

Under the Western Ghat Development Programme, an extent of 27.25 acres has been brought under mulberry by 100 farmers to whom mulberry saplings were issued free of cost. After plantation 10 sitting training are given to each farmer with a training stipend of Rs.150/-. Under the Special Central Assistance sericulture scheme implemented by TAHDCO; an extent of 146 acres of land under mulberry is planted by 146 farmers up to March 1997. A sum of Rs.1650/- is given as saplings subsidy and Rs.500/- as training subsidy to each farmer. Each sericulturist receives a loan amount of Rs.23,600/- through bank. Of this Rs.9900/- is given as subsidy, Rs.6025/- as marginal money and the balance is as loan seventy four Adi-Dravidars have been assisted under the scheme up to March 1997. Under the Integrated Rural Development programme 45 sericulturists are benefited through various nationalised banks. The beneficiaries get Rs.13600/- each as bank loan and a sum of Rs.4000/- is paid as subsidy by the District Rural Development Agency, Tirunelveli.

Pathamadai Mats

Fine Mats of Pattamadai

The climate of the Ambasamudram taluk and the soil characteristics may perhaps explain the growth of Korai grass in the area. The rainfall is light and evenly distributed and the temperature is equable. There are wide areas of sandy soils and north and north-east of this lie broad level plains of rich black loam in the north of Tamiraparani. The black soil of the river valley ever lies a stiff yellow clay known as "Kurugai Mum". The alluvial soil on the banks of the river is ideal sites for the growth of korai grass. The most famous of the varieties of Korai grass in the "Karungadukorai" which grows on five acres of land opposite Tharuvai village situated on the Tirunelveli-Shencottai trunk road. The Korai grass grows up to a height of 3 1/2 ft. to 4 ft. and there are two harvests in a year-one in September - October and again in February-March. It takes three to four months for the Korai grass to grow fully before harvest. The grass is green in colour, the lower and being of a whitish due.[38]

The special kind of korai grass "cyperas" growing wild on the banks of the river Tamiraparani and found in Tharuvai village, 11 km. from Pattamadai and in Mela Thiruvengadapuram village, also few km. from Pattamadai is most suited for high count weaving and forms the main raw material for weaving fine mats. Perhaps, the wild nature of this grass is ideally suited for mat weaving. Since the grass available locally was insufficient to meet the demands of the weavers of Pattamadai, about 80 bundles were imported annually during 1950's from the Cauvery river bed near Karur.

The village of Pattamadai which is so famed for its fine mats is situated 3.2 km. from Cheranmahadevi in Ambasamudram taluk. It is connected by the trunk road between Palayamkottai and Shencottai and lies 22 km. due west of Palayamkottai. The approach to this village from Cheranmahadevi is marked by the permanent Maradiya Sasta set on a pinnacle of a rock.

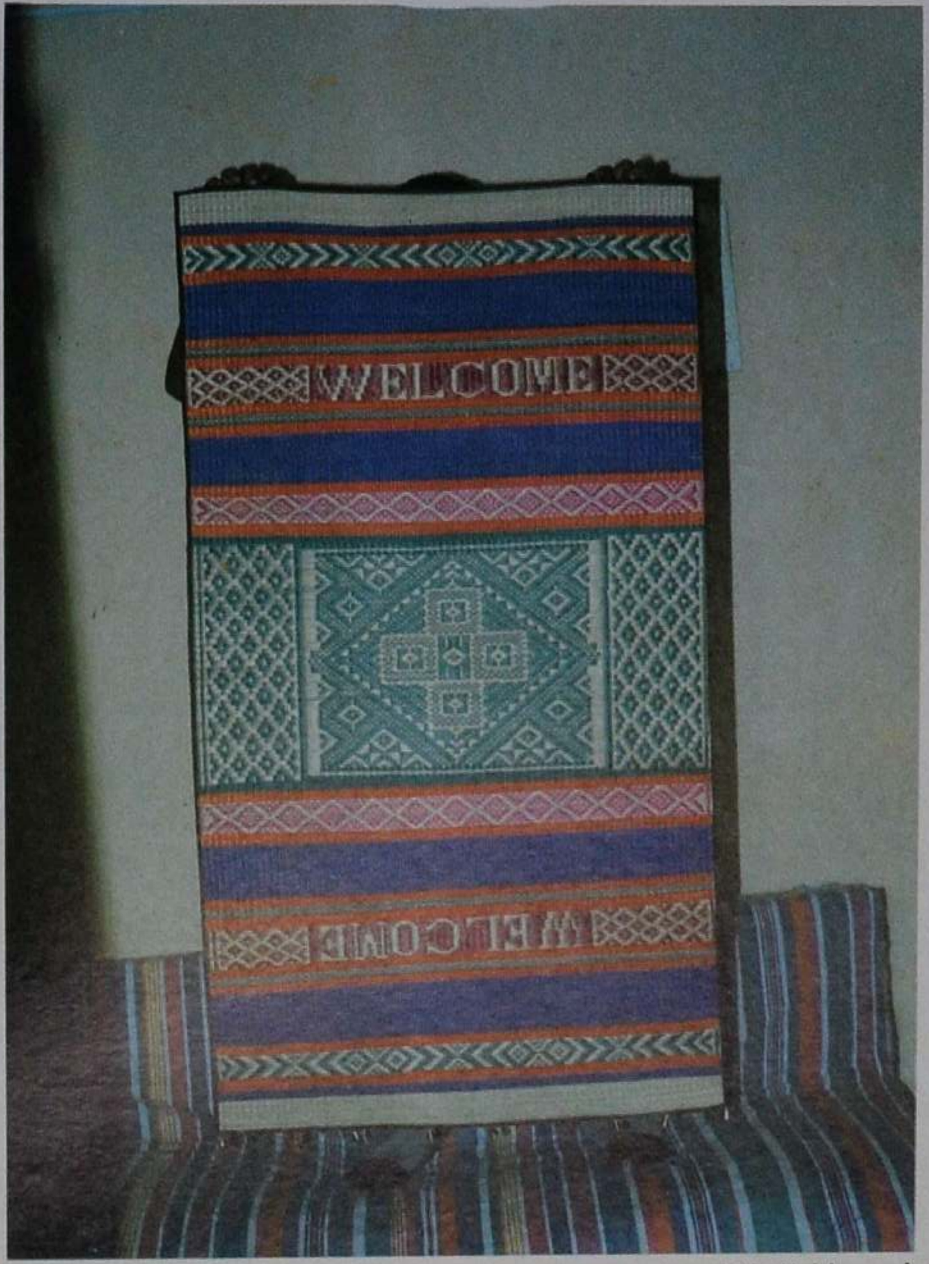
The river Tamiraparani flows at a distance of 3.2 km from this village and the wild Korai grass growing on its banks provides the raw material for the weavers in the villages of Pattamadai, Veeravanallur and Harikesavanallur. This industry was almost the sole monopoly of about 61 Lebbai Muslim families in the Pattamadai. Even though there are many Rowther Muslims who engage themselves in weaving of ordinary mats, fine mats are produced only by the Lebbais. In 1917, there were four of five Muslim Lebbais who were practising this craft. In the year 1961 there were 61 families engaged in the craft.

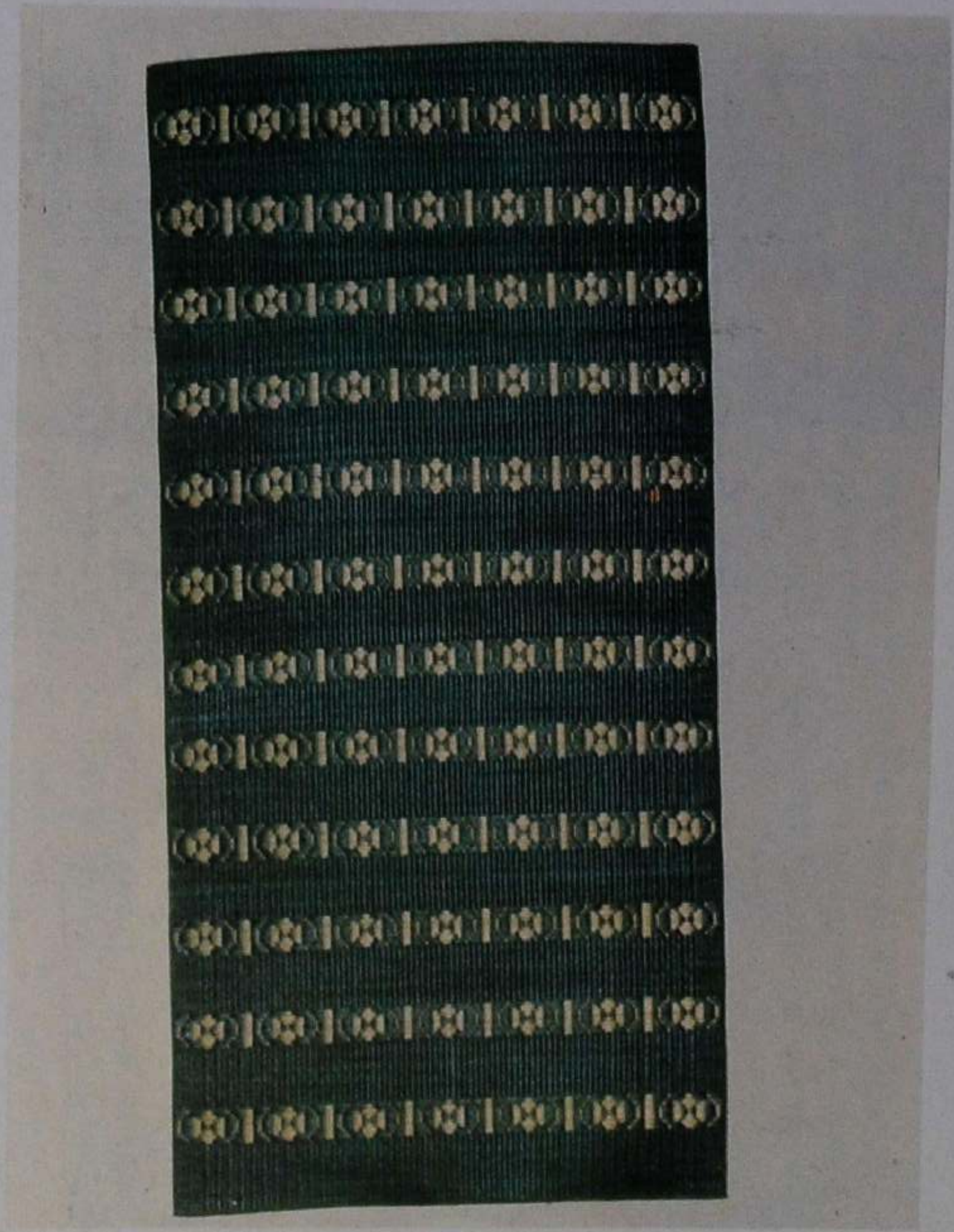
Mat weaving has practised throughout India by people of different communities wherever necessary raw materials are available. Floor mats are commonly made in South India. Mat weaving is á popular handicraft of

Tamil Nadu and this craft is practised throughout the State. Tirunelveli district has been an important centre of mat weaving. Besides the coarse variety of mats produced at Veeravanallur and Harikesavanallur, a finer type of mat is manufactured at Pattamadai. The mats are made of varying sizes and thickness . Fine mats have the weft being of Korai grass and warp of cotton or even silk threads of 80 to 100 counts. The surface of the mat is softer than silk. It can be folded like cloth and carried in a man's fist if rolled like a stick. Weavers in Pattamadai show great skill and the fine specimens of mats have become famous throughout India and abroad. Raw material Korai grass is grown on river banks and on the sides of pools, streams and water channels. Korai grass of Ambasamudram taluk is claimed to be of superior quality. These varieties are exported to other districts where mat industry dominates among the rural crafts and engages a number of workers. The former variety is also imported into the district. Muslims are the main weavers apart from the Nadars and Kallars.

Besides the Korai grass mats, palmyra leaf mat manufacturing was found at Chetty kulam village in Nanguneri taluk. A number of co-operative societies were functioning in the district to promote this craft. There were production and sales societies at Harikesavanallur, Viravanallur and Pattamadai villages of Ambasamudram taluk. An industrial co-operative society for palm-leaf mat weaving was functioning at Chettikulam village of Nanguneri taluk. Two more societies one at Murugaikulam and the other at Keelapavoor of Tenkasi taluk, had been established.

It is mentioned in the reports that more than three generations back a Lebbai by name Syed Khalifa Meeran landed in Pattamadai. His exact origin is not known except that he hailed from the West Coast. He settled down permanently at Pattamadai and married a girl from the Rowther Community in the village. He found the place suitable to carry on preaching as there were some Rowther Muslim families engaged in agriculture. The children of Kalifa Meeran were not satisfied with mere preaching and so they sought to mat weaving which was a flourishing industry in the district, to supplement their income. With their natural talent, they mastered the craft and so the succeeding generations have become the sole monopolists of mat weaving. The 61 families of Lebbais in Pattamadai were said to be the descedants of Syed Kalifa Meeran and his sons. Seeing the Lebbais combined preaching with mat weaving the Rowther started to dovetail their occupation of agriculture with weaving of rough quality mats as the latter was more suitable and convenient for their women in Purdah. The production of fine quality mats is attributed to Hassan Bawa Lebbai, a descendant of Syed Kalifa Meeran, who lived about a century ago. As has been stated above, his forefathers were engaged in the preparation of rough quality mats.On one occasion, it is stated, he was drying wild Korai grass in the sunlight when it started raining heavily accompanied by squally





Wall Hanging Mats, Pathamadai

winds. His Korai grass was blown off into the river. After the rains had stopped he found his Korai grass floating in the Tamiraparani river nicely/ and thoroughly seaked to water. He salvaged the Korai grass and found to his surprise that the grass was soft and smooth. He quickly separated the fibre from the waste and found that he could split the korai fibre into a number of strands of a fineness he had never seen before. Hither to he could only obtain 30 to 40 counts of strands, now he found he had before him strands of 100 to 120 counts. With these strands, he commenced weaving. He found the product of such softness that he decided to experiment with his Korai grass by soaking it in the Tamiraparani river water. The next stage was the cutting of Korai growing wild on the banks of the Tamiraparani river and repeating the process of soaking. From that time onwards, out of his loom poured mats of excellent quality and smoothness. This started attracting the attention of his fellow artisans who learnt from him the secret and from that day the Lebbai community in Pattamadai began the production of fine mats, which still stand unsurpassed and unrivalled by weavers in other parts of the country.

The reason for producing fine quality mats in Pattamadai village alone rather than in the adjoining villages of Harikasevanallur and Veeravanallur is due to the fact that the particular kind of korai grass from which fine strands can be extracted grows naturally on the banks of Tamiraparani river, on a stretch of five acres, opposite. Tharuvai village, 11 kms. from Pattamadai. The effect of the combination of the Tamiraparani river waters and the wild korai grass which is peculiar only to Pattamadai is the main reason for the establishment of this industry at Pattamadai. The Rowther Muslims in Pattamadai, Harikesavanallur (11.2 km. from Pattamadai) and Veeravanallur (8 km. from Pattamdai) who weave rough quality mats do not have facilities to extract this korai grass, the land and its usufructs being enjoyed solely by Lebbais of Pattamadai and so they are unable to break through the monopoly of the Lebbais.

Rowther Muslims from adjoining villages were trained in weaving techniques connected with the manufacture of fine mats and were setting up looms to produce these fine mats. Thus, it was sheer accident that this famous handicraft was established at Pattamadai. Of the 80 families of the Lubbais, 61 were engaged in mat weaving, Ten were merchants and nine heads of families were employed in Government offices.

Pattamadai is for centuries a world renowned centre for the production of exquisite quality silk mats, and some of the super fine mats could be folded like a saree. The mats of Pattamadai have won world fame. It had the honour of sending a hand-woven superfine silk mat to Queen Elizabeth-II on the occasion of her coronation in 1953. The mat, made on a special order had cost, even in those days, Rs.985. The skill of the artisans of Pattamadai impressed many dignitaries from various countries

including the former USSR President Mickail Gorbachev as also the leaders of India.

In 1946, the Governor of the erstwhile Madras Province, Archibald Nye, accompanied by his wife, visited Pattamadai to see for himself how these mats were being manufactured.Some years ago the mat weavers of Pattamadai also got a bulk order from West Germany for the supply of beach mats for sun bathing. The artisans of Pattamadai have also taken part in many all India crafts fair held in different parts of the country and also in the training programmes organised by the All India Handicrafts Board.

The popularity of mat weaving as an occupation stem from the fact that the workplace is one's own home which is a mini-mat weaving unit and it brings in a tidy sun. The equipment required is primitive. More important as they are cheap, the coarse varieties move at a brisk pace in the market, enabling the weavers to get their returns quickly. Each mat weavers' home serves as a production unit where every member plays a role. The various aspects of the work like splitting of the kora grass, dyeing and weaving are carried out at home. However, since full time mat weaving does not bring adequate income, the menfolk are gradually switching over to other occupations, leaving the profession almost entirely in the hands of women. It is interesting to note that weaving of superfine mats is confined to Lebbais, a sect among Muslims Apart from the presence of the skilled weavers, it is the availability of special Korai (a variety of grass) which is responsible for the blossoming of the industry here. A few decades ago the fields on the banks of the Tamiraparani river where 'korai' was cultivated were converted for other crops and at present the entrepreneurs are getting the 'korai' from the farms at Thottiyam, Musiri in Tiruchirappalli district and also from Namakkal and Karur . Cultivation of this variety of grass has been taken up as a commercial crop in Karur area in the wet lands. The wild Korai grass found growing during rainy seasons along the banks of Tamiraparani river in Karungadu village in the district is the best raw materials for superfine mats in view of their special softness and glow. But they have to make with the Karur variety in view of the limited availability of the grass. Normally the fresh Kora grass is exposed to the sun for two days so that it acquires a golden hue. It is soaked in running water for about a week continuously. Weavers in Pattamadai keep the grass under either in the Kannadian channel that flows near the village or in the Tambaraparani river a little farther off. During this process, the weavers have to clean the grass kept under water every day. After this process, the grass is cleaned and split lengthwise into thin fine filaments, the width of which varies, depending on the variety of the mat to be woven. If the mats are to be coarse, the width of the sliced grass would for bigger. The better the quality, the thinner is the filament. The sliced filaments of varying thicknesses are

dipped separately in dyes of various colours for about half an hour. Generally, the colours used are yellow, red, blue, violet and green. After dyeing, the coloured filaments are dried in the shade. The filaments are then mounted on to the loom for weaving. The looms are very simple and cheap. The common type consists of two short bamboo poles placed at a distance equivalent to the length of the mat and kept in their positions by two pegs driven into the ground. Normally, if the weaving is continuous a superfine mat could be woven in about a week. If any designs or names are to be woven in the mat the time taken is proportionately more. However, lesser counts (coarser varieties) can be woven in a day or two. After the mat is woven to its full length, the rough edgers are trimmed and stitched. In the case of superfine mats, costly silk cloth is used to line edges.

After a mat is woven, it is rubbed delicately with a stone to give it a sort of polish and a smooth surface. A fine mat of 100 counts cost Rs.70/-, a 123 count mat Rs.80/- and a 140 count mat Rs.95/- in 1985. Mats costing from Rs.50 to Rs.900/- are manufactured here. It takes about 20 days to one month to manufacture the artistic superfine mat and about four superfine export quality mats are manufactured in Pattamadai per month. About Rs.25000/- worth of finished mats were being manufactured every month in Pattamadai., The fine mats of Pattamadai can be used for even five years. Apart from mats, fancy articles like wall hangings, tea sets, table and prayer mats, lady's hand bags and purses with Kora are also produced. Carpets for pooja rooms and drawing halls, attractive hand fans, etc. are the marvellous specimens of the beautiful workmanship and the bounty of nature.

The mat industry got a break through, when the State Industries Department formed the Pattamadai Fine Mat Weavers' Cooperative Society in 1954 to lend a helping hand to the people engaged in mat weaving. In 1970s the society was brought under the control of the Tamil Nadu Khadi and Village Industries Board. In 1994, there were 275 members in the society. The Government have also established a workshed inside the society premises where eight looms are provided. The society is purchasing and marketing mats worth Rs.1.5 lakhs, per annum. It supplies mats mostly to Government undertakings. Some have started their own private business houses without supplying mats to the society. Mechanised looms have come in places like Tenkasi and Mudaliyarpatti. But, these mechanised looms could not weave the superfine mats. The society runs seasonal depot at Courtallam.The showrooms of the Kerala Handicrafts Development Corporation (Kairali) place regular orders for mats from the Pattamadai weavers.

Marketing poses as much problem to these societies to the Pattamadai Fine mat Weavers' Society. The society at Veeravanallur purchases finished goods from the members at reasonable rates and sells them to merchants

throughout India. The market is quite brisk for coarse and medium mats. The main market for these products are the States of Maharashtra, Gujarat, Andhra Pradesh, Madhya Pradesh, West Bengal, Uttar Pradesh and Delhi.

Mat Weavers' Association

Though fine mats were produced for a long time, the Lebbais never thought of organising themselves into any association or society to present an organised from both in the matter of procurement of raw materials and selling their products. Mats were produced individually and sold to the merchants who in turn disposed these goods for profits ranging between 30 per cent to 50 per cent Some of the Lebbais used to transport their products personally to Tirunelveli, Ambasamudram and Veeravanallur. But even then there was no guarantee that the products could be disposed of at a fair price. Some philanthropic customers, who had placed their orders direct and who were not traders, during their visit Pattamadai saw the woeful state in which the weavers existed and advised them to form Association to improve their economic condition. Thus in the year 1937, an Association was formed with 40 members. The membership gradually rose to 48 in 1940, 55 in 1950 and 74 in 1954.The Association was not registered and its main work was to collect korai grass and distribute it evenly among its members. There was no steady market for the goods, as the orders were not executed through the Association and the working became defunct. So a fresh Association was formed and registered in 1950. In 1954, the Association had to be dissolved as it failed to maintain uniform quality of products. The Association was ineffective in its control over finance and marketing of finished goods. At this stage Sri V.A.K.Rangan, Agent, Royal Insurance society, Madras placed order with the mat weavers for a fine mat of value Rs.150/- to be presented to Queen Elizabeth-II of England during her Coronation on 2nd June 1953. The mat was duly presented to the Queen and was on exhibition along with other presents. It was that the All India Handicraft Board realised the existence of this craft. A team of all India Handicrafts Board visited Pattamadai and studied the economics of this crafts. Realising the need for stablising the craft, measures were initiated to form a cooperative society in the place of the defunct association. A grant of 5000/- was sanctioned by the All India Handicrafts Board towards working capital and the Pattamadai Fine Mat weavers Cooperative society was formed in 1954.

The Cooperative society at Harikesavanallur was the earlier one to be started i.e. on 14 April 1944 with a total membership of 27. It was started on behalf of the Muslim women of the village whose husbands and relatives were not in a position to return from Burma (now known as Myanmar) during the second world war. In 1960 there were 208 members. The Veeravanallur Mat Weavers' Cooperative Society was started on 7April 1955. The main object was to provide work to the womenfolk and to

augment the income of the poorer sections of the Rowther community. There were 158 members in 1960. The Government sanctioned a sum of Rs.7250/- to the Veeravanallur Cooperative society for participation in various exhibitions and for paying the touring representatives to tour important business centres and canvas orders. The society at Veeravanallur purchased finished goods from the members at reasonable rates and sold them to merchants throughout India. Before the formation of cooperative society merchants and master weavers used to advance money and raw materials on condition that the goods be sold to them a cheaper rates. The market was quite brisk for coarse and medium mats. These products were sent to the various State Emporia throughout the country.

Arts and Crafts

Tirunelveli is famous for manufacture of crafts such as artistics lamps, temple bells, (Brass and Bell metal products). Manufacturing units are functioning at Vagaikulam and Ayikudi. The activities of the Tamilnadu Handicrafts Development Corporation in Tirunelveli district are given below:

The Tamil Nadu Handicrafts Development Corporation Ltd.

The Tamil Nadu Handicrafts Development Corporation Ltd., a Government of Tamil Nadu Undertaking has been established to promote and develop handicrafts of Tamil Nadu and assist artisans in marketing their products. The corporation has its own sales showrooms including the one at Tirunelveli to market the handicrafts products. The corporation runs production centres at Vagaikulam in Ambasamudram taluk and Ayikudi in Shencottai taluk for major traditional crafts of Tamil Nadu where production is being carried out by employing artisans and piece rate workers under the supervision of a Superintendent. The various items produced in the production centres are marketed through its own sales showrooms. The Corporation has implemented various schemes to impart training in the manufacture of traditional crafts like bronze castings, brass lamps, bells, etc., to preserve their existence. After training, some of the trainees start their own production and a few join the production units run by the Corporation. To popularise its products, the corporation organises exhibitions at various places within and outside Tamil Nadu.[39]

Lamps and Temple Bells Making Industry

Lamps have been made and used for various purposes in the country from time immemorial. Tamil Nadu was one of the leading States in the Country in the production of exquisite lamps of different shapes, sizes and designs. Beautiful artistic lamps and temple bells are produced at Vagaikulam, a remote village about five km. from Ambasamudram . Many artisans in the village are masters in the art of manufacturing lamps of numerous varieties with skill that has been passed on from generation to

generation. In an unbroken tradition, craftsmen created beautiful lamps in metal, terracotta and stone. There are lamps for use in worship at home, lamps for temple rituals and also lamps for use as decorative pieces. There are standing lamps, swinging lamps, pedestal lamps and hand lamps, lamps, with birds and flowers, with a single flame and with many wicks are also manufactured here.

The availability of fine alluvial soil in the Tamiraparani river bed, situated near the village, promotes the craft in this part of the district. There are about 60 private brass lamps and other utensil production units in Vagaikulam which cater to the needs of private business houses.

The Poompuhar Brass and Bell Metal Production Centre, Vagaikulam

A brass and bell metal production centre was started by the Tamil Nadu Handicrfafts Development Corporation at Vagaikulam. The centre was started in the early 1960's by the Department of Industries and Commerce and was brought under the control of the Tamil Nadu Handicrafts Development Corporation in the year 1974 after its formation. It is a major production centre of beautiful artistic lamps and temple bells. The tradition and the creativity of generations of craftsmen of Vagaikulam are nurtured and displayed by Poompuhar. The setting up of the Poompuhar production centres enabled the artisans of Vagaikulam, till then using traditional methods, to switch over to the latest technologies. The production centre possesses an air blower, a hand burning lathe and grinding, polishing and drilling machines.

For making brass lamps, the raw materials are heated and the molten metal is then poured into metal moulds to standard specifications and fixed in boxes in which the fine alluvial soil collected from the river bed is filled. The red hot metals get cold inside the mould in about two hours. They are taken out and filed to remove the rough ends. Then with the help of lathe the outer portions are smoothened and screw threads of the interior portions of the lamp are drilled. Next is the burnishing work which ensures that the entire outer portion of the lamp is made very smooth and without any bristles. The lamps are then polished with the help of machines, and then engraving is done by trained artisans.

The centre manufactures small yali lamps, Vasamalai lamps, Lakshmi deepam double decker lamps, Rudradeepam lamps, Kai lamps and Malabar (Thrissoor) lamps. The Centre has helped in putting a grill in the Tiruchendur temple. The centre engages about a dozen artisans of the village on piecemeal salary basis and lamps are manufactured only on orders from the Poompuhar emporia situated in different districts. The Handicrafts Corporation gets orders from Singapore and Malaysia. It manufactures one tonne of finished items every month. Raw materials like brass scraps, tin and copper are procured from Madurai and Tiruchirappalli. The artisans

of this village were sent to Muradabad in Uttar Pradesh for training in the manufacture of brass items, flower vase and candle stands. The corporation organises one year training programme for local artisans and also for those hailing from other places at the Vagaikulam Production Centre since 1981.

Poompuhar Brass and Bell Metal Production Centre, Ayikudi

This production centre is situated about 12 km. from Shencottai towards Surandai road in Tenkasi taluk.The centre which commenced its production on 1 October 1985 It is under the direct control of the Tamil Nadu Handicrafts Development Corporation, Chennai. Brass lamps in various sizes and designs are manufactured here. Brass, copper, alluminium, lead, zinc are the raw materials required for the product. Brass is purchased from the Minerals and Metals Corporation of India Ltd. The manufacturing work involves moulding, fitting, turning, burnishing, engraving, polishing, touching (Karuppadithal), etc. To give employment opportunities to the local people, the centre with the assistance of the Handlooms and Handicrafts Development Corporation, has started a training course of one year duration. The applicant must have completed 15 years of age and passed 8th Standard. Each trainee is paid Rs.250/- p.m. as stipend. Finished products are sent to Tamil Nadu Handicrafts Development Corporation for marketing.[40]

Items of products manufactured in the Centre are 1) 4 1/2" Thongu Vilakku, 2) 10" Anna Vilakku, 3) Paladai Vilakku, 4) 1 1/2" Thongu Thakali, 5) 26" Ornamental lamp, 6_) 18" Ornamental lamp, 7) Five faces Arathi, 8) 18" Anna Vilakku, 9) 18" Prabai Vilakku, 10) 13" Prabai Vilakku, 11) Lakshmi Decorated lamp, 12) 27" Anna Vilakku, 13) Lotus Hanging Lamp, 14)13" Swan Lamp, 15) 27" Ornamental lamp, 16) 8 1/2" Swan Lamp, 17) 10" Ornamental Lamp, 18) 13" Ornamental lamp, 19) 7" Sudar Vilakku and 20) 12" Branch Lamp.The unit produced various items of products to the value of Rs.803770/- in 1986-87, Rs.1140892/- in 1991-92 and Rs.1442558/-.

Production particulars between 1986-87 and 1994-95.

Sl.no.	*Year*	*Production* (In Rs.)
1.	1986-87	8,03,770.00
2.	1987-88	5,16,262.00
3.	1988-89	3,09,998.00
4.	1989-90	6,20,872.00
5.	1990-91	8,01,921.00
6.	1991-92	11,40,892.00
7.	1992-93	16,00,727.00
8.	1993-94	14,42,558.00
9.	1994-95	8,63,319.75

Tamil Nadu Terracota Centre, Karukurichi

Terracota which forms a part and parcel of handicrafts enlightens the cultural heritage of the people. Made from the fine clay available locally, they speak the artistic value in and out of the country, skill and dexterity of the artisans. The Tamil Nadu Terracota centre, a private unit, is functioning at Karukurichi on the main road, which attracts the visitors by its workmanship products. This centre, though a small one, has widespread popularity all over India. It employs a few local people mainly women.

Cane Furniture Manufacture

Shencottai, a taluk headquarters, 81. km. from Tirunelveli town and six km. from Courtallam is situated close to the Kerala border. It is a major centre for the production of cane articles. More than 300 families are engaged in the manufacture of decorated chairs, cots, swings, teapoys, sofas, etc., in the town and surrounding villages. About Rs.2 crores worth of articles are manufactured and marketed every year from this town. Cane furniture produced in Shencottai have earned, appreciation not only in India but also in abroad. The Western Ghats with its thick forests and abundant cane and bamboo trees and good craftsmen from Kerala paved way for the concentration of this industry in Shencottai more than five decades ago. The work involves cutting of the canes, bending them after heating, soaking them in water for netting purpose and finally the netting work. The cost of the products manufactured here range from Rs.350/- (ordinary chair) to Rs.12,00/-(sofa). A dining table set costs about Rs.8,000/ -. The daily earnings of a good craftsman range from Rs.50/.- to Rs.150/- Till the introduction of plastic products, it was the cane industry which supplied products to ships, spinning mills etc. Rocking chairs, diamond chairs, oval chairs, teapoys, diwan cots, sofas, swings, and cane shelves are some of the favourite products. Foreigners attracted by the beauty of the cane products often visit Shencottai and place orders. Prior to 1984, the companies engaged in the manufacture of cane products in Shencottai got the raw material from the reserve forests situated between Nagercoil and Rajapalayam and near Pollachi and Udumalpet in Coimbatore district. After 1984, when the Government of Southern States imposed a ban on felling cane and bamboo in the reserve forests, the manufacturers have to purchase the raw material from Arunachal Pradesh, Assam,West Bengal and Andamans. The cost of transporting from Arunachal Pradesh to Shencottai comes to more than Rs.35,000/- per lorry load. Due to this, the prices of cane and cane products have increased many fold within a decade.[41]

Veera Vanji Artisan Welfare Association was informed on 18 March 1995 certified by the Khadi and Village Industries Commission, New Delhi. It is located in Piranoor border village Tenkasi taluk, one km. from the Shencottai on the Shencottai-Tenkasi road. In 1996, there are 26

Terracotta, Karukurichi

members.The Sarvodaya Sangams situated in the State, procure the cane products from the society and sell them through their showrooms. The association is also supplying the products to Karnataka State. The industry got a boon when the Central Government through the Khadi and Village Industries Commission, introduced a special employment programme in the district. The District Rural Development Agency is helping the rural unemployed persons to get training in this industry under TRYSEM scheme by providing stipends. There are 10 students undergoing training and Rs.350/- per month is paid as stipend. Training programme was started on 28 September 1995. A majority of the trained persons are absorbed in this industry itself which helps to improve the economic condition of this area.

Beedi Manufacture

Beedi manufacture of late is an important industry. Every village with a fair Muslim population has a small factory where beedies are made. In Melapalayam 5000 Muslim families are engaged in this work. Mukkudal has risen in recent years one of the important beedi centres, where Sokkalal beedies are patented.

Till 1915, there were no beedi companies in Melapalayam or in Tirunelveli. In 1915, a woman from Bombay (now Mumbai)came to Melapalayam and settled at Samayana Kader Mohaideen Moopar street. She made beedies at her house and the people bought beedies from her. Then she supplied beedies to the local markets. She ran the unit as a cottage industry only. In 1920, Mr.Savukannu of Alapillai street, manufactured beedies at his house and sold them in the local market and nearby villages like Konganathanparai, Karungulam and Munnirpallam. Daily, he turned out 5000 to 1000 beedies with the help of 50 workers. The wage was 3,1/2 annas per 1000 beedies turned out, and it was paid both in cash and in kind like tamarind, tapioca, blackgram, etc. There was no organised beedi making units in Melapalayam for several years. Beedies were tied by fibre instead of cotton thread at that time. In 1922, the Kamal Beedi Company was established in Melapalayam. Since then, a sizeable number of the inhabitants of Melapalayam showed interest in beedi making because by that time the weaving industry started to decline and the local people abandoned it. Hence, people began to seek employment in beedi making units which provided regular employment. From 1935 onwards, several beedi making units started beedi manufacture. [42]

During 1937-38, some other beedi making units like Chaui beedi, Vairam Mark beedi, Hanifa beedi works, etc., started beedi manufacture. Between 1950 and 1960 beedi making units like 5 Number beedi, Syed beedi, Kaja beedi, M.S.P.beedi, Yanai beedi, Chamothi beedi competed with the unregistered beedi units. Between 1960 and 1965, several small

units declined on account of several competition. At the same time, new beedi manufacturing units like Mamootti (spade) beedi company, Bamsha beedi, Insha beedi, Kaja beedi, Sun Flower beedi, etc., appeared. Though there were several beedi works at that time, only a few units like Kaja beedi, Ganesh beedi and Malliser beedi could run their business efficiently.

After 1980, there was a steady progress in the growth of beedi making units. During early 1990's nearly 25 units with 85 branches were functioning, Of the 25 units, Kaja Beedi Company, Ganesh beedi Company, 5 Number Beedi Company, Chandrika Beedi Company and Malliseri Beedi Company enjoy a good market. Though several beedi companies exist in the district, the ones which thrive successfully and are known for their quality and sustenance are only low. Some of them are narrated below.

Kaja Beedi Company

The Kaja Beedi Company was started in the year 1948 by Hajee Abdul Kareem. The company gets raw materials (beedi leaves and tobacco) from Rajawalli Company in Tirunelveli town. This company has 17 branches in Melapalayam and 31 branches in other surrounding areas. All branches are functioning under the contract system. Nearly 15,600 beedi rollers are working in this company.

Number 5 Beedi Company

The company was started in 1950 by V.T.S. Abdul Hameed Rowther. It has 60 branches of which three are in Melapalayam. This company provides employment to about 15,000 persons who are working as beedi rollers. The company gets tobacco from Nibbani and Gujarat.

Chandrika Beedi Company:

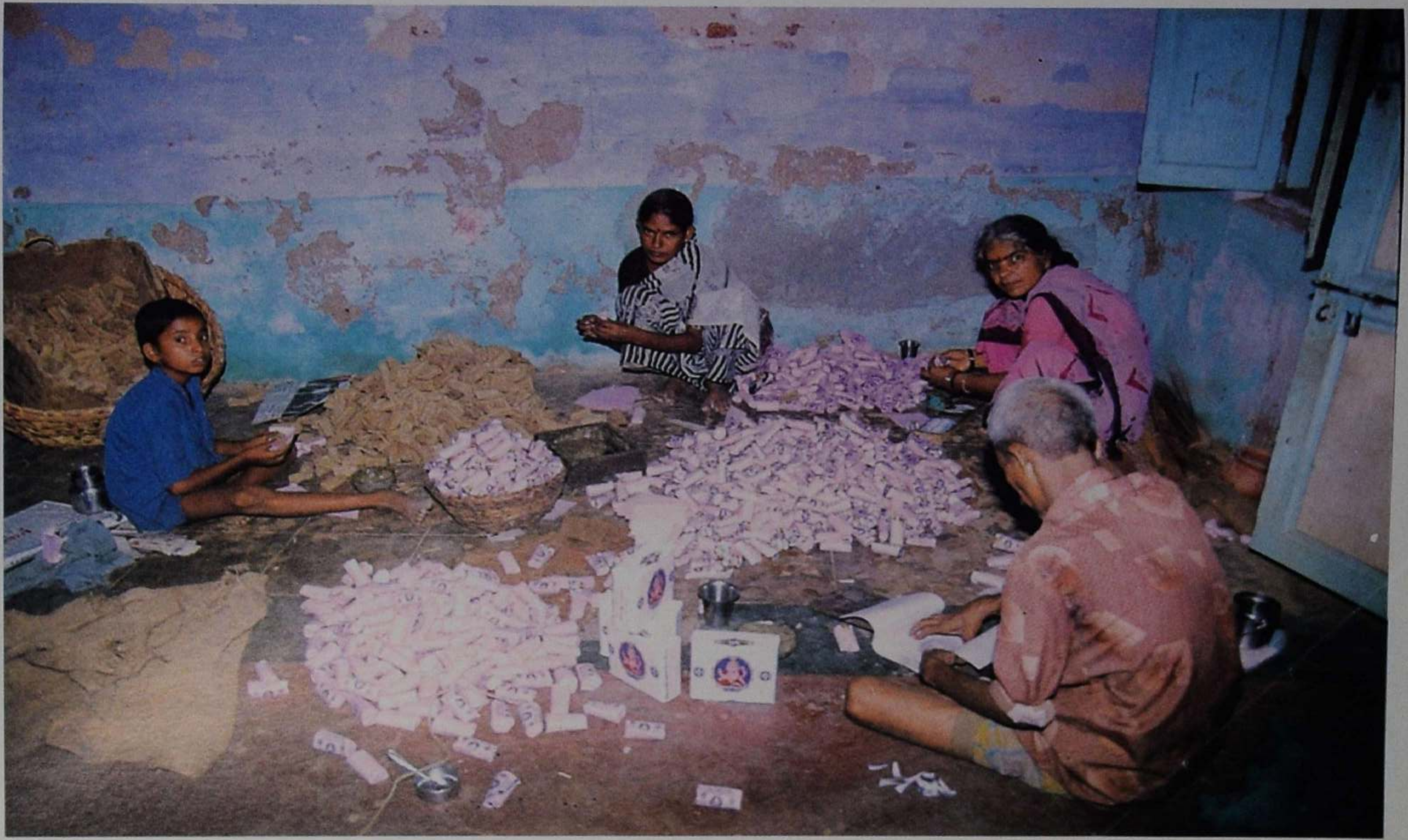
Chandrika Beedi Company was started in the year 1971 by Thiru P.A.Abdul Kareem. Ninety employees are working in this company. The company has 30 branches of which four are in Melapalayam. Every branch has nearly 200 beedi rollers. The Chandrika beedies are marketed at Chennai, Nellore and other places.

Muruga Home Ganesh beedi works

This company was started in 1958 by Thiru P.Rahuram Pirabu and now there are 13 partners. The company has eight branches, of which two branches are under the control of the contract system. About 2600 persons are working as beedi rollers. Beedi workers have been covered under Provident Fund scheme.

Jothiman Beedi Company

The company was started in 1975 by Thiru Aboo. It has 11 branches and about 200 beedi rollers are working in each branch. Provident Fund



Beedi Making Unit, Melapalayam

scheme is implemented in the Company. Arasan beedi,Syed beedi Tirunelveli, Arunagiri Sait beedi, Chidambarapuram near Kalakad, Nanguneri taluk, Ayyappan beedi, Thoppur, Salai Nainar Pallivasal near Ambasamudram taluk, Chokalal Ram Sait beedi, Mukkudalare important beedi making units in the district. Beedi industries are located in Melapalayam, Mukkudal, Thatchanallur, Rajavallipuram; Alangulam, Surandai, Tenkasi and Mudivathannendal.

There were 1032 beedi making units in Tirunelveli district during the year 2000 which were providing employment to 5612 persons comprising 5603 males and nine females. Further, the total number of home workers engaged in beedi making occupation in the district was 179732 consisting of 15795 males and 163937 females. The minimum rate of wages fixed for the workers engaged in labelling work in 1989 was Rs.12.00 for packing one lakh beedies with single wrapper and Rs.13.00 for packing one lakh beedies with double wrapper and seventy five paise for packing 1000 beedies with ring labelling.

Employment in Cigar units.

There are five categories of workers engaged in rolling cigars with double wrapper and three classes in rolling cigars with single wrapper. The minimum wages fixed for the workers in 1989 for rolling 1000 cigars with double wrapper were Rs.21.00 for workers classified under Class I; Rs.23.00 for Class II Rs.28.00 for Class III; Rs.30.00 for Class IV and Rs.33.00 for Class V. Similarly, for rolling 1000 cigars with single wrapper, an amount of Rs.20.00 for Class I workers; Rs.25.00 for Class II workers and Rs.30.00 for Class III workers were fixed as minimum wages in 1989.

PALMGUR INDUSTRY

In Tamil Nadu, the palmgur industry had been in existence from early times. So for as the development of this industry in the State is concerned, it was relatively connected with the prohibition policy of the State Government. The foundation for the development of the palmgur industry in areas under prohibition was laid by C.Rajagopalachari when he introduced prohibition for the first time in India in 1937 in Salem district. As the first Premier of Madras, he had incorporated the propagation of palmgur as an important ameliorative measure in rehabilitating the ex-toddy tappers rendered unemployed as a result of the introduction of prohibition. In 1946, one third of the State became dry and in October 1948, the entire Madras State became dry consequent on the introduction of prohibition. The introduction of prohibition resulted in a stimulus to the development of palm jaggery industry, which is a fairly important cottage industry in the State. Tamil Nadu leads in the development of palmgur industry through cooperatives. The Tamil Nadu State Palmgur Federation continues to implement the schemes relating to palmgur with the assistance

of district federations. The Tirunelveli district federation at Thoothukkudi, was established to implement schemes relating to palmgur in the Tirunelveli district. The State Federation provides funds needed for the district through the district federation and in districts where there are no district federation, it passed on funds to district primaries. The State federation also undertake the sale of neera, palmgur, candies, palm sugar, fibre confectionery and other palm products. The palmyra fibre is collected in Panakudy, Tisayanvilai, Achampatti, Arunachalapuram, Panavadali and Nanguneri. Palm fibre is a thread like material extracted from the pathals of the palmyra petiole and has a good market in foreign countries for manufacture of brushes. Fibre is available throughout the State and artisans are engaged in collection and sizing during the month when there is no tapping. The Tirunelveli District Palmgur Federation entered the field of fibre export in 1961.[43]

Tamil Nadu State Palmgur Cooperative Federation Limited

The Madras State Palmgur Cooperative Federation Limited has been working with headquarters at Chennai. Its area of operation extends over the entire State of Tamil Nadu. The Federation started working from 16 January 1958. The main objectives of the State Federation are to develop, assist and coordinate the work of the affiliated District Federations and Primary jaggery manufacturing cooperative societies, to secure for them financial assistance from Government and Khadi and Village Industries Board. It renders technical and financial assistance to them and to solve economic problems facing the artisans, to purchase and supply raw material, manufacture and marketing of palm fibre and other products.

Tirunelveli District Jaggery Loan and Sale Society

The Tirunelveli District Jaggery Loan and Sale society at Thisayanvilai had marketed 1190 maunds of jaggery produced by the members of its affiliated societies value at Rs.4,177 in the year 1952. It also encouraged the manufacture of palmyra mats by the members of its affiliated primaries by undertaking the marketing of the mats.

The Khadi and Village Industries Commission sanctioned financial assistance for the development of palmgur industry in Tamil Nadu through the Tamil Nadu State Khadi and Village Industries Board. The funds are routed to the Palmgur Cooperative Societies through the Tamil Nadu State Palmgur Cooperative Federation at the State level and district federation at the district level. The State Federation has undertaken the sale of neera, palmgur candy, palm sugar, confectionery, fibre and other edible and non-edible palm products and procurement, processing and exporting of palm fibre to foreign countries.

Among many varieties of palm trees, coconut, date, palmyra and sage are largely grown in India and palmyra is more in Tamil Nadu. Palmyra trees grow in dry areas. These trees are useful to mankind, no portion of it being wasted; every inch of it is useful to ruralfolk either as edible or non-edible. It provides food, shelter and raw materials for rural handicraft industries. Among many Palmyra products neera, nungu, root and fibre are important. Neera and fibre are important in terms of market value. Neera is palm juice which forms as raw material for the production of palm jaggery, palm candy, palm sugar, beverages, chocolates, etc. Neera tapping is seasonal.

There were about 77 lakhs of palmyra trees in the district. About 0.39 lakh of people were engaged in various industries connected with palmyra trees like production of palmgur jaggery, fibre products, palm leaf products, supply of palm seeds, etc. There were 98 primary palm jaggery manufacturing cooperative societies functioning in the district having 24563 palm products artisans as their members. To uplift the standard of living of the palm product artisans schemes under Integrated Rural Development Programme/Tamil Nadu Adi Dravidar Housing and Development Corporation, Drought Prone Area Programme etc., are implemented through the primary jaggery manufacturing societies which are affiliated to Tirunelveli District. Palmyra Products Cooperative Federation functioning at Thoothukkudi . The palm products of the primary jaggery manufacturing societies are purchased by Tirunelveli District Palmyra Products Cooperative Federation through its branches functioning at Puliangudy, Pottalpudur, Valliyur, Thisayanvilai and Palayamcottai. The Tirunelveli District palmyra products Cooperative Federation is owning palm estates at Kulavanigarpuram (22 acres) Palayamkottai block. Regunathapuram (70 acres) in Valliyur block and Kottai Karungulam (83 acres) Radhapuram block. The palmyra trees in the estates have been leased out to palmyra artisans. Under the Agreed Programme up to the year 1987-88, a sum of Rs.35.13 lakh as loan and Rs.15.19 lakh as subsidy were disbursed to Palmyra artisans by the Tamil Nadu Khadi and Village Industries Board and Tamilnadu Palm Products Cooperative Federation. Further under I.R.D.P. schemes, Rs.0.17 lakh as loan and Rs.5.08 lakh as subsidy were distributed to 2120 artisans.

Palmyra Products Seasons and Employees Wages

In Tirunelveli east region, Neera season starts in February and ends in June, Nungu season is between May and August . Palmyra fruits season in September-October; Roots season in December-January; Fibre season in April-June and palm leaves season in February-March. Wages paid to the craftsmen engaged in palmyra work was Rs.8.00 during peak season and Rs.3.00 during loan season in the year 1987. For mat makers, it was Rs.7.00 and Rs.4.00 per day during peak season and lean season respectively. The daily wages to the palm leave collector ranged between

Rs.4.00 and Rs.3.00 per day during peak season and lean season respectively. For jaggery makers, the wage was Rs.13.00 and Rs.5.00 per day during peak and lean periods respectively. For fibre extractors, it was Rs.8.00 and Rs.3.00 per day during peak and lean periods. For tappers, the wage was Rs.15.00 and Rs.12.00 per day during peak and lean periods respectively. For Neera, sellers, the wage was Rs.12.00 and Rs.4.00 per day during peak and lean seasons respectively.

Palmyra mats

Palmyra mats are common in places where the palmyra tree is plentiful and the womenfolk of the tappers' families during the off season employ themselves in making mats, baskets and other useful articles. Mats of a coarse texture are manufactured by Muslim women and sent to Pettai for local use mostly for packing goods for transport. Smaller coarse mats are in much demand in Calicut for packing fish. Nadar women also take to the weaving of palmyra mats.

Palmyra Products Manufacturing Industry

The Palmyra provides a variety of occupations for a large number of the people. Loose red soil with sub-soil springs provide the best edaphic features for the Palmyra. The rain in March and April is important to the Palmyra for the development of the spathe. For purposes of tapping the spathe is proned twice a day and the daily yield of a normal male tree is half to one Chennai measure. To avoid fermenting the pots are lined with lime and the juice then is sweet. It is called 'pathani'(Neera) which forms a delicious drink in the hot seasons. When the juice (without lime) ferments it becomes Kallu(toddy). The quantity and duration of yield are in the case of all kinds of palmyra most uncertain. Most of the juice is utilised in the preparation of palmyra jaggery and allied products. Various palmyra cooperative societies are: [44]

1.	Keeraikarathatta	Jaggery Manufacturing Coop.Society
2.	Maruthachivizhi	"
3.	T.Kulasekaran	"
4.	Idayankudi	"
5.	Champonvizhi	"
6.	Puliamkodu	"
7.	Chinthamani Jayavilas	"
8.	Subramaniapuram	"
9.	Vasuthevanalur	"
10.	Ramanathapuram	"
11.	Vammanankudi	"

12.	Ayankulam	Jaggery Manufacturing Coop.Society
13.	Navaladi	"
14.	Karaichithuputhur	"
15.	Kumbikulam	"
16.	Kavalkenary	"
17.	Kalanthapanai	"
18.	Zonamalai	"
19.	Thiruvenkatanathapuram	"
20.	Kannanallur	"
21.	Valliammalpuram	"
22.	Srivenganathapuram	"
23.	Sithambarapuram	"
24.	Maruthappapuram	"
25.	Pappankulam	"
26.	Pappankualm	"
27.	Moondrandaippu	"
28.	Reddiyapatti	"
29.	Pambukoil Santhai Women coop.society	Palm leaf Basket
30.	Muthaliyarpettai Cooperative society	Jaggery Manufacturing
31.	Pappakudi	"
32.	Bramadesam	"
33.	Vadakku Ariyanayapuram	"
34.	Kasinathapuram	"
35.	Rayagiri	"
36.	Sivagiri Cooperative society	"
37.	South Kallikulam	"
38.	Melur Duraisamypuram	"
39.	Soorankudi	"

40.	Singaneri	Jaggery Manufacturing Coop. Society
41.	Kandankulam	"
42.	Kadaiyankuam	"
43.	Melaiyadiputhur	"
44.	Therukkusathiram	"
45.	Valappanadanoor	"
46.	Santhamaram	"
47.	Arunatchalapuram	"
48.	Pandapuram	"
49.	Thirumalapuram	"
50.	Meruthamaputhur	"
51.	Ravanasamuthiram	"
52.	Pangalsurandai	"
53.	Karumpuzhiyuthu	"
54.	Kadailundi	"
55.	Avarakkadu	"
56.	Mubirundazhi	"
57.	Duraisamypuram	"
58.	Chinathambinadanoor	"
59.	Aamaiyapuram	"
60.	Pulamkulam	"
61.	Lakshmipuram	"
62.	Muthukrishnapari	"
63.	Kuruvankottai	"
64.	Nallur	"
65.	Andipatti	"
66.	Andipatti	"
67.	Alankulam	"
68.	Vadiyur	"
69.	Munatchipuram	"

70.	Chellapillaiyarkulam	Jaggery Manufacturing Coop.Society
71.	Kelaiyarpillaiyur	"
72.	Palvanpatti	"
73.	Pudupatti	"
74.	Alathiyur	"
75.	Poothathankudieruppur	"
76.	Therkkuveeravanallur	"
77.	Alachiyapandiapuram	"
78.	Vadakkivahaigulam	"
79.	Pulliyanpatti	"
80.	Vankatapathy	"
81.	Thattarapapuram	"
82.	Kawvoor	"
83.	Sokkalingapuram	"
84.	Royuthaparanai	"
85.	Thalaiyuthasubramaniyapuram	"
86.	Ulavanar	"
87.	Valliammal	"
88.	Karuvanda	"
89.	Kurumalapari	"
90.	Udayathur	"
91.	Levinjipuram	"
92.	Suvisheelapuram	"
93.	Ellayanainaruku am	"
94.	Kalakudi society	Palm Leaf Cooperative Society
95.	Erwadi Cooperative Society.	Jaggery Manufacturing Co-op. Society
96.	Oochikulam	"
97.	Santhiyampalayam	"
98.	Karunkulam	"

99.	Achiampadu	Jaggery Manufacturing Coop.Society
100.	Eraippuvari	"
101.	Keelakaruvellankulam	"
102.	Keelakaduvetti	"
103.	Kudamkulam	"
104.	Kulaiyaneri	"
105.	Duvaraikulam	"
106.	Thoranakurichi	"
107.	Thirukarankudi	"
108.	Theppavilai	"
109.	Chettikulampudumenai	"
110.	Eramathi	"
111.	Navaneethakrishnapuram	"
112.	lakshmiyoor	"
113.	Nambipattu	"
114.	Nambithalaiyanpattiyam	"
115.	Sokkanathannapatti	"
116.	Odaimarichan	"
117.	Chettikulam	"
118.	Rajagopalachari	"
119.	Ganavamcherllur	"
120.	Rathapuram	"
121.	Rochamangaram	"
122.	Ramarkrishnapuram	"
123.	Iyinthamkattalai	"
124.	Inamappuvilai	"
125.	Inam Madappuram	"
126.	Irukkanaduri	"
127.	Idaiyankulam	"
128.	Nattapettai	"

129.	Erwadi	Palm Leaf Co-op. Society
130.	Kattaripatti	Jaggery Manufacturing Co-op. Society
131.	Kandithamkulam	"
132.	Kallur	"
133.	Kandaigondan	"
134.	Singamparai	"
135.	Sri Rangarajapuram	"
136.	Sadaiyandiyur	"
137.	Kunthakulam	"
138.	Salaiputhur	"
139.	Perumpathur	"
140.	Kandigaipari	"
141.	Kasthurirangapuram	"
142.	Karunkannankudieruppu	"
143.	Kalloothu	"
144.	Kalluvani	"
145.	Kadampaduvalasu	"
146.	Kavisal	"
147.	Keelapavoor	"
148.	Kalluneerkulam	"
149.	R.Venkatesapuram	
150.	Melakrishnapuri	"
151.	Negarammalpuram	"
152.	Valaithottam	"
153.	Deivanayagaperi	"
154.	Keelapandarapuram	"
155.	Vannarpettai	"
156.	Therippanai	"
157.	Avudaikalapattinam	"
158.	Adaikalapattinam	"

159.	Vellalakulam	Jaggery Manufacturing Co-op. Society
160.	Melacheriyandur	"
161.	Madavellannadu	"
162.	Thirumalapuram	"
163.	Arunachalapuram	"
164.	Kadayalurutty	"
165.	Meenakshipuram	"
166.	Sivalingapuram	"
167.	Vadakkankulam	"
168.	Elakkirivilai	"
169.	Suvisheelapuram	"
170.	Melur Duraisamypuram	"

Pin Making Industry

Pins and allied products manufacturing are pioneer units in the district. Various products ranging from pins to pipes are manufactured in the industrial group. Popularly called 'Bell Pins', a private concern has established several units at Palayamkottai to manufacture various products such as paper pins, staple pins, safety pins, cotton buds, steel wires, stitching wires, concrete pipes, etc. The machines for the manufacture of these products have been developed indigenously as a measure of import substitution. Pins are of different dimensions 16mm, 18mm, 20mm, 22mm, 26mm, 32mm, and 36mm. Rustless pins are made of brass and used extensively by garment makers. The units have power operated machines which produce 400 pins per minute. Mostly women are employed for packaging.[45]

The Bell Products Company

The Bell Products company had established a unit in 1952 to manufacture paper pins made of steel, brass and photo-bronze, paper clips and mild steel wires. Its production capacity is 300 tonnes per annum. The products are used in offices, garment units and electronic industries.

The Lily pins manufacturing Company

The company established unit in 1960 and manufactures safety pins made of steel and brass. The capacity of the unit is 150 tons per annum.

The Bell Pins Manufacturing Company

The company established a unit in 1970 with a capacity to make 200 tonnes of pins per annum. It manufactures staple pins which can be made use of in offices, departmental stores for packaging wood panaling etc.

Tirunelveli Spunpipe Company, Palayamkottai

Tirunelveli Spunpipe Company established a unit in 1972 to manufacture reinforced concrete pipes pressure and non-pressure, concrete blocks to cater to the needs of Government and non-Government programmes special coated and curved pipes are also manufactured under required specification. The products are used in construction of roads, bridges, sewage water tanks, security cabin, septic tanks, waste bins and construction of buildings.

Goodwill Enterprises, Palayamkottai

This unit was established in the year 1974. It manufactures cotton buds with one and two ends in large quantity for home market. The finished products are used in hospitals, electronic industry and homes.

Darlingsons Wire-forms, Palayamkottai

In 1992, Bell Pins company established a plant to manufacture a wide range of products covering paper pins, paper clips, staple pins, safety pins, steel wires stitching wires flat and round, electroplating and reinforced concrete pipe, laminating machines, gravaur printing machines on paper, film foil and cloth are also manufactured. The unit is equipped with very sophisticated machine tools. It supplies them to domestic and international markets.

Garnet Industry

A group of complex Silicate minerals by name Garnet have physical properties of isomatric crystal formula and general chemical formula. The beach area of Radhapuram taluk contains a variety of garnets which is industrial use almandite, the occurrence of which here, is commercially attractive. Occurring in concentrated form in the river mouth of Nambiar and Anuman in the Radhapuram taluk. Garnet is of beach placer deposits of sands associated with other heavy minerals and quartz etc., in varying quantities. It is deposited in the literal zone in the coast by the waves in depths ranging from 5 cm. to 20 cm. The mineral could have been mainly extracted from Khondalite suite of rocks, common in the western ghats, disintegrated by physical weathering, transported by the rivers draining into the sea and deposition into the sea bed. The rivers bring in a lot of these minerals during floods. Sea currents and waves help to bring these minerals to the shore and heavy minerals are deposited. As the layers of

garnet sand, deposited by the waves are so removed, the place get refilled repeatedly by the waves. The garnet is collected by labourers manually using shovels, spades and baskets. This rare mineral is collected under mining lease granted by the Tamil Nadu Government. Garnet collection a labour intensive industry provides employment to thousands of people in the district particularly in the drought prone area. It fetches good foreign exchange. The State Govt. earns a revenue nearly Rs.50 lakh per year by way of royalty. V.V.Mineral company at Keeraikaranthattu is one of the important garnet industries in the district. Processed garnet is used as a water filteration element, the powdered garnet is used for polishing television tubes and for sand blasting for surface treatment.[46]

V.V.Garnet Factory,Tisaiyanvilai

V.V.Mineral Company has set up a factory at Keeraikaranthattu, a tiny village in Radhapuram taluk, an industrially backward area. This factory produces garnet a 'wonder mineral' that has a fame in the world. The factory was started in 1989. From inception, the factory is making a good performance in exports. Garnet mineral is obtained from the sea without affecting Ecology and Environment. Garnet is the right mineral which has met all the conditions - environment as well as health. The garnet is found deposited in thickness of 5 mm to 30 mm. No heavy machinery is involved. It is done manually with no disturbance to nature and its environment. It has all the sanction and licence from both the Central and State Governments. Two implements, spade and basket used in the collection of garnet sand provides livelihood to thousands of workers in the predominantly agricultural region faced by drought often due to failure of monsoon.

District Industries Centre, Tirunelveli

The Tirunelveli District Industries Centre was formed to gear up industrialisation and render all assistances required for the setting up of new units under one roof in the district. District Industries Centre is functioning in this district from 1st July 1978. It provides assistance to small scale industries in the sphere of finance,getting clearance of various licences, registration, incentives and loan assistances offered by the Government of Tamil Nadu District Industries Centre assists entrepreneurs in selecting viable industries, provides project reports registers provisional small scale industrial units, permanent units and ancillary units, gets clearances of various licences through single Window Clearance Committee. It provides information to entrepreneurs relating to machinery buyer, seller details; facilitates hire purchase of machinery assistance through National Small Industries Corporation; helps import of capital goods, machinery spares and raw materials. It makes arrangement for finance

through banks and other financial institutions, and arranges seed money assistance up to Rs.25,000/- from financial institutions; arranges margin money assistance to Scheduled Caste/Scheduled Tribes entrepreneurs to get loan under THADCO scheme. It recommends registration under export promotion cell. It registers the cottage industries and handicrafts units and helps get scarce raw materials. Through Entrepreneur Development Training Programme it guides the entrepreneurs in starting new industries and provides technical information and guidance. It registers and organises Industrial Cooperative Societies in order to give employment opportunities in rural areas. It provides margin money assistance to sick units under Sick Industries Rehabilitation Programme. It conducts motivation campaign in Panchayat union areas and identifies entrepreneurs.[47]

Schemes implemented by the District Industries Centre

State Capital Subsidy

Radhapuram and Tenkasi taluks have been declared as most backward taluks and entrepreneurs who start industrial units in these taluks can avail a state capital subsidy of 20 per cent or Rs.20 lakhs whichever is less on fixed investments, Nanguneri, Shencottai, Sankarankoil and Palayamkottai taluks have been declared as backward taluks and 15 per cent subsidy or Rs.15 lakhs whichever is less on fixed investment is eligible for new units started. The State capital subsidy of 15 per cent on fixed investment is also granted to units started in State owned industrial estate.

Special Capital Subsidy

The industries which would fetch a special capital subsidy of either 20 per cent or Rs.15 lakhs (whichever is less) when started here are, automobile spare parts, drugs and pharmaceuticals, solar energy, equipments and other non-conventional energy sources, export oriented gold jewellery making and diamond processing units, pollution control equipments, Jute Industry in Ambasamudram taluk, sports goods and accessories, food processing industry, building materials like aluminium on PVC doors and windows and window frames etc. Electronic units that are set up in the district are eligible for special subsidy at the rate of 20 per cent of the investment made in fixed investment subject to a ceiling of Rs.35.00 lakh. This is applicable to small, medium and major industries.

Leather Industries

Leather units that are set up in the district are eligible for a special subsidy on 20 per cent on fixed investment subject to a maximum of Rs.20 lakhs. A special subsidy of 10 per cent of the value of assets created

towards setting up on effluent treatment plant with monetary ceiling of 1.2 lakh is made available for installation of effluent treatment plants by the existing tanneries.

Subsidy for Purchase of Generator

New generators purchased by captive users are given subsidy at the rate of 15 per cent with monetary ceiling of Rs.5.00 lakh. This subsidy is available to existing industries irrespective of their location. Conventional resource based industries and power intensive units are not eligible for the above subsidy.

Power Subsidy

Power subsidy is eligible at the rate of 40 per cent, 30 per cent and 20 per cent on the rate of power consumption amount to the newly started units for the first, second and third year respectively.

Coir Industries

A subsidy at the rate of 25 per cent on fixed investment is granted for the setting up of new coir units using coconut fibre as raw material

Sales Tax Deferral/Waiver Scheme

Entrepreneurs who set up new industries in the most backward taluks of Tenkasi and Radhapuram are eligible to get concession for full waiver of Sales tax dues for a period of five years up to a ceiling of the total investment made in fixed assets or these industries can opt for deferral of Sales tax for a period of nine years. In other backward taluks the concession deferral of Sales tax for a period of nine years is offered.

Seeuy Scheme

Under this scheme, the District Industries Centre through its Task Force Committee recommends loans to nationalised banks for the follows:

1. Industries-maximum limit - Rs.35,000/-
2. Services " - Rs.25,000/-
3. Business " - Rs.15,000/-

This scheme enables the educated unemployed youths in the age group between 18 and 35 with a minimum qualification of S.S.L.C. to start the ventures of their own. The loan carries a subsidy of 25 per cent.

Amount of loans disbursed and number of persons benefited under the Self Employment Scheme for educated unemployed youth from 1983-84 to 1992-93

Sl.no.	*Year*	*Amount of loan disbursed* (Rs.in lakhs)	*Persons benefited*
1.	1983-84	109.90	740
2.	1984-85	147.62	917
3.	1985-86	92.93	518
4.	1986-87	71.75	373
5.	1987-88	31.29	203
6.	1988-89	46.02	294
7.	1989-90	42.21	256
8.	1990-91	27.50	158
9.	1991-92	32.26	216
10.	1992-93 *(up to Sep.1993)*	27.23	159

Number of small scale industries permanently registered and no. of persons employed yearwise and categorywise from 1988-89 to 1992--93 are given in *Appendix-2.*

Number of handicrafts and number of persons employed from 1985-86 to 1989-90

Sl. No.	*Years*	*Number of units*	*Persons employed*
1.	1985-86	571	1142
2.	1986-87	490	994
3.	1987-88	404	812
4.	1988-89	506	1010
5.	1989-90	563	1126

Tradewise handicrafts units, number of persons employed from 1990-91 to 1992-93 is given in *Appendix-3.*

Rural Industries Project (RIP)

The object of the Rural Industries Project is to develop industries in rural areas to augment the rural economy and thereby prevent the exodus of villagers to urban areas. To begin with the RIP was implemented only in the

undivided Nanguneri taluk but later extended to the entire district. The RIP sanctions the Rural Industries Project loan to set up units in rural areas by utilising it as margin money to take the original loan for creation of fixed assets with low interest and moratorium. It implements the Rural Artisan Programme which is aimed at training the rural artisans in selected cottage industries and handicrafts with stipend so as to enable them to start the industries of their own. They are provided the necessary tools.

The number of persons benefited by both the schemes are detailed below

Sl.no.	*Year benefited.*	*No.of persons*	*Amount* (Rs. in lakhs)
1.	1983-84	25	2.36
2.	1984-85	25	4.50
3.	1985-86	19	4.20
4.	1986-87	22	4.30
5.	1987-88	14	2.55
6.	1988-89	10	1.98
7.	1989-90	6	1.22
8.	1990-91	5	1.02
9.	1991-92	2	0.50
10.	1992-93	4	1.00
	Total	**132**	**23.06**

Nanguneri Rural Industries Project

Nanguneri taluk was one of the three areas selected in Tamil Nadu for the intensive development of rural industries. The Project which came into existence in 1963 comprised Nanguneri, Valliyoor, Radhapuram and Kalakadu blocks - all situated in an industrially backward area. The Project aimed at to identify the natural resources and industrial potential of the area. Training of artisans and small entrepreneurs was imparted as also on provision of common facility service centres and credit facilities. The project aimed at to create employment opportunities for 3200 persons in less than three years. About 27 industrial cooperatives registered so far were functioning smoothly providing employment to about 660 persons in brick making, palm leaf article manufacturing, pottery making, oil crushing, lime manufacture, Korai mat weaving and many other trades. The chief natural resource was the palmyra tree. More than 5000 villages in this area depended upon the manufacture of coarse packing mats out of palm leaves.[48]

To enable these villagers to manufacture improved articles of utility, training centres for manufacturing palm leaf articles were established - two in Radhapuram block and one each in Nanguneri, Valliyoor and Kalakadu blocks. One hundred and eighteen women were trained for a period of year in these centres. Five industrial workers' societies were registered for the benefit of the artisans already trained. Twenty boys were trained for a period of one year at Thisayanvilai in Radhapuram block in the manufacture of scrubbing brushes of various types and designs from out of palmyra fibre. One training centre was established at Therkku Valliyoor in Valliyoor block to train 15 boys in the manufacture of cots, utility articles like tiffin baskets, waste paper baskets, cycle trays, etc., out of palm naar and strands. Twenty trainees were undergoing training in a centre for the manufacture of art silk hair nets established at Kootapuli. A centre for the manufacture of chalk pieces was started at Vadakku Vijayanarayanam. Women were trained in the manufacture of Korai fine mats of Pathamadai variety at Eruvadi in Kalakadu block. A unit to train 12 artisans for a period of one year in the manufacture of bell metal products was established at Valliyoor.

Common Service Centres

With a view to raising the productivity of the village artisans (blacksmiths and carpenters) and provided servicing facilities to agriculturists in repairing their pumpsets and other implements, 10 common service centres were established four each in Nanguneri and Kalakadu blocks and one each in Valliyoor and Radhapuram blocks. These carpentry and blacksmithy service centres were set up at places where there was concentration of such artisans. In each of the centres, power operated simple machines like wood working lathe, thickness planer, drilling machine, hacksaw, bench grinder, circular saw welding transformer and improved tools were provided. A general purpose engineering workshop with foundry was established at Valliyoor. The workshop was manufacturing agricultural implements steel furniture and iron and steel articles required for the State Electricity Board. Training in book binding, composing and printing for a period of three years in Tirunelveli District Cooperative Printing Press was imparted.Sericulture based on mulberry plantation in Valliyoor and Kalakadu blocks was introduced. A demonstration silk farm was established at Panagudi in Valliyoor block.

State Industries Promotion Corporation of Tamil Nadu Limited

The State Industries Promotion Corporation of Tamil Nadu Ltd. popularly known as SIPCOT extends financial assistance to medium and large scale industries in Tamil Nadu. A sum of Rs.0.81 crore were disbursed by SIPCOT in 1993, to the industrial units in the district. Tenkasi and Radhapuram are the most backward taluks and Shencottai, Sankarankoil

and Nanguneri are the backward taluks in the district which are eligible for State Capital subsidy. A subsidy of 20 per cent subject to a ceiling of Rs.20 lakh to small, medium and major industries (excluding resource based conventional industries) is available to units set up in most backward taluks. New industrial units, small, medium/major scale industries which employ women workers more than 30 per cent of their total workers shall be eligible for an additional capital subsidy of five per cent of investment in fixed assets subject to a ceiling of Rs. 5 lakh. Industries such as food processing, garments, leather goods, hosiery and match are excluded to avail this additional subsidy.[49]

Tamil Nadu Small Industries Corporation Limited (TANSI)

The Tamil Nadu Small Industries Corporation Ltd. an undertaking of the Government of Tamil Nadu, has established its furniture and engineering works at Pettai near Tirunelveli in the year 1961. It commenced its production on 26 January 1961. It is engaged in the manufacture of standard items of furniture required by Government Departments, public institutions, etc. The engineering division undertakes manufacture of general engineering and light fabricated items.[50]

Another TANSI unit viz., foundry and engineering works has also located at Pettai which is functioning from 7 January 1964. It manufactures pipes and special in foundry section. The engineering division undertakes light engineering and fabrication works. Tansi sales centre established in the year 1981-82, to sell the articles and furnitures manufactured by TANSI functions in Tirunelveli. Production and sale particulars of TANSI Furniture and Engineering works and TANSI Foundry and Engineering works from 1980-81 to 1994-95 are given as under:

Production and sale of TANSI furniture and engineering works from 1980-81 to 1994-95

Sl. no.	*year* (Rs.in lakh)	*Production* (Rs. in lakh)	*Sales*
1.	1980-81	34.89	35.01
2.	1981-82	51.06	43.66
3.	1982-83	48.21	47.00
4.	1983-84	59.18	43.52
5.	1984-85	24.40	38.89
6.	1985-86	39.98	46.76
7.	1986-87	42.67	43.54
8.	1987-88	47.69	45.94

9.	1988-89	55.96	62.81
10.	1989-90	64.09	64.98
11.	1990-91	47.15	49.44
12.	1991-92	29.87	28.91
13.	1992-93	39.01	34.51
14.	1993-94	70.25	70.26
15.	1994-95	40.17	46.87

Production and Sales particulars of Foundry and Engineering Works from 1980-81 to 1994-95

Sl.no.	*Year*	*Production* (Rs.in lakhs)	*Sales* (Rs. in lakhs)
1.	1980-81	23.13	28.28
2.	1981-82	35.42	32.75
3.	1982-83	37.53	31.50
4.	1983-84	30.07	26.78
5.	1984-85	21.27	23.10
6.	1985-86	38.35	33.14
7.	1986-87	26.71	41.81
8.	1987-88	40.29	41.05
9.	1988-89	57.56	58.15
10.	1989-90	48.16	50.24
11.	1990-91	38.75	38.73
12.	1991-92	34.18	35.92
13.	1992-93	31.04	29.34
14.	1993-94	22.58	31.56
15.	1994-95	30.41	27.47

TAMIL NADU SMALL INDUSTRIES DEVELOPMENT CORPORATION LTD. (TANSIDCO)

Pettai Industrial Estate

There are 16 Government sheds, 30 SIDCO sheds and 10 tiny sheds in the industrial estate. In the year 1983-84, 10 SIDCO sheds were constructed under I Phase, 10 sheds under II Phase in 1988-89, five sheds

under III Phase in 1992-93 and in the IV Phase, another five sheds were constructed in 1993-94. 10 sheds (18′ x 10′) were constructed in 1979-80 under tiny sheds. In the Industrial Estate at Ambasamudram, 10 tiny sheds (18′ x 10′) were constructed in (1979-80)[51]

Distribution of Iron and steel raw materials from 1990-91 to 1994-95

Sl.no.	*Year*	*Quantity of raw materials distributed*	*Value* Rs.
1.	1990-91	334 Mts	58 lakhs
2.	1991-92	606 "	103 lakhs
3.	1992-93	281 "	48 lakhs
4.	1993-94	208 "	35 lakhs
5.	1994-95	78 "	13 lakhs

Distribution of non-ferrous raw materials (Paraffin wax)

Sl.no.	*Year*	*Quantity distributed (in Metric tonnes)*		*Value (Rs. in lakh)*	
		Type-II	*Type-III*	*Type-II*	*Type-III*
1.	1991-92	231.600	-	42.638	-
2.	1992-93	214.800	42.840	43.870	6.913
3.	1993-94	207.675	52.325	43.248	8.747
4.	1994-95	259.475	19.150	54.146	3.206

Marketing Assistance Scheme

SIDCO participates in the tenders floated by Government Departments and Undertakings on behalf of the small scale units and obtains orders for the SSI units, registered with SIDCO under its marketing assistance scheme. The Corporation arranges the supply of SSI products at annual rate contract basis to Government Departments/Undertakings. The Corporation is nominated as State Level Agency for participating in tenders on behalf of the SSI units in Tamil Nadu and renders marketing services to SSI sector. SIDCO arranges for Buyer-Seller Meet, so that the Departments become more aware of the SSI products. The number of units benefited during the years 1992-93, 1993-94, 1994-95 were 2,3, and 2 and the value of orders executed were Rs.0.580 lakh, Rs.0.620 lakh and Rs.0.221 lakh respectively.

The Bell Industrial Estate

The Bell Industrial Estate was founded in the 1952 as a tiny industry with a total employment of 20 persons and with the connected power load of 25 HP producing paper pins, paper clips and office staples. The unit has spread over more than 30 acres of land on the Tiruchendur, Thoothukkudi highway road. Later during 1960's another unit was started to produce exclusively for safety pins. During the period there were acute shortage of steel wires, the primary raw material for these products and so another independent unit was started to produce steel wires of very fine diameter of both copper coated and zinc plated. During 1970's, there were much restrictions to import machineries to produce these wire products,which caused a necessity to take up the manufacture of capital machineries. This difficulty was met by producing all the required machineries in the estate,. a few more units for producing fire works, knitting needles, concrete blocks, concrete pressure and non-pressure pipes and health care products like cotton buds were also set up in the estate during 1980's. The estate is a full fledged composite unit producing the required capital machinery, raw material and the end product. The total employment in the whole of Bell Industrial Estate is more than 600 and the connected power load have crossed 1500 HP. In regard to employment about 70 per cent of the total employees are women. The management runs educational institution, a mother and child care hospital. Pollution control methods have been adopted on the effluent treatment.

Nellai Small Scale Industries Association

Nellai Small Scale Industries Association popularly known as 'NEISTIA' was founded in 1979. The object of the association is to represent the problems faced by the small industries to the authorities, to conduct seminars regarding investment pattern, technology transfer, exports, imports, etc. It also conducts industrial exhibitions.There are other associations like District Clay and Tile Manufacturers Association, District Timber and Saw Mill Association and District Candle Manufacturers Association[52].

Industrial Relations

The setttlement of industrial disputes and maintenance of industrial peace form the main functions of the Labour Department. The first measure taken to improve industrial relations between the employers and the workers. with a view to maintaining industrial peace is contained in the Industrial Disputes Act, 1947. This Act has undergone a series of amendments in order to improve the machinery for the settlement of industrial disputes

and to confer additional benefits on the workers. The amendment Acts of 1955, 1956 and 1957 have introduced more important changes in this Act. The Act provides for the investigation and settlement of industrial disputes through the medium of Works Committee at the level of the factory, through conciliation by Labour officers, through voluntary reference of disputes for arbitration, and through adjudication by a three tier system of adjudication machinery, viz., Labour Courts, Tribunals and National Tribunals. The other important provisions of the Act are the provisions for giving prior notice workmen of any change in conditions of service; recognition of settlements arrived at between the parties otherwise than in the course of conciliation proceedings, payment of compensation for involuntary unemployment, retrenchment and closure, priority for re-employment of retrenched workers quick recovery of money due to workers under awards, settlements or by way of compensation, etc.[53]

The causes of trade disputes are many and varied. They arise over rates of wages, hours of work, leave, bonus and other conditions of employment and often also over questions of dismissal, retrenchment and victimisation of workers, refusal of employers to recognise unions of their employees, the demand for "closed shop" and participation in management by the workers and strikes and lockouts are among other causes of industrial unrest. In India, the State has to a considerable extent, intervened by means of legislation and administrative orders for regulating the conditions of employment of industrial workers. The prevention and settlement of industrial disputes and the establishment of peace and prosperity in industry depend upon harmonious industrial relations. Trade union movement plays a decisive role for the achievement of industrial democracy. Trade unions and their leaders are generally consulted by the State Government in regard to vital labour problems. Employers' Organisations are generally well organised, specially in the principal industries like cotton textiles, cement industries. The Industrial Disputes Act requires the establishments employing 100 or more workers to constitute Work Committees consisting of representatives of employers and employees. Such work Committees are to meet periodically to discuss the grievances of the workers. The Government emphasise the importance of the Work Committees for promoting good understanding and relations between labour and management. The Labour Department is looking after the industrial disputes and takes steps to bring industrial settlement.In 1983, fifty industrial disputes were settled by conciliation and 58 disputes referred to for adjudication. In 1988, thirty five disputes were settled by conciliation and 46 disputes referred to for adjudication. Number of industrial disputes settled and number of strikes, lock outs, mandays lost, etc., from 1983 to 1992 are furnished.[54]

Industrial Disputes settled by conciliation/Disputes referred to for adjudication from 1983 to 1992[55]

Year	*Disputes settled by conciliation*	*Disputes referred to for adjudication.*
1983	50	58
1984	26	54
1985	50	45
1986	38	61
1987	39	54
1988	35	46
1989	37	55
1990	65	23
1991	73	6
1992	40	3

Number of strikes, lockouts and number of mandays lost from_1983 to 1992

Year	*Strikes*	*Lockout*	*Total no.of workers*		*Mandays lost*	
			Strikes	*Lockout*	*Strikes*	*Lockout*
1983	4	1	2210	120	30030	240
1984	27	-	11057	-	42620	--
1985	30	-	29201	-	394667	--
1986	7	2	5993	10110	55131	31590
1987	14	-	3101	-	96446	--
1988	28	2	2725	741	110045	12688
1989	2	-	165	-	2580	--
1990	11	2	2328	1100	20110	22700
1991	7	1	1326	64	42934	896
1992	18	3	8971	569	223677	25979

Entrepreneurs

After the bifurcation of Tirunelveli district into Tirunelveli and Thoothukkudi, major industrial units like India Cements. Industrial Chemicals

Ltd., Sun Paper Mills, Madura Coats come under Tirunelveli whereas SPIC, Port, Thermal Power Plant are in Thoothukkudi district. Thiru S.N.N. Sankaralinga Iyer of Kallidaikurichi was a prominent industrialist who founded the India Cements, Industrial Chemicals Ltd., at Sankarnagar near Tirunelveli. He also took efforts for the establishment of South India Shipping Corporation, Chemicals and Plastics Ltd., Some of the prominent industrialists who spread industrial activity throughout the State and India like T.V.Sundaram Iyengar, Prop.of T.V.S.Group Companies, Venu Srinivasan, Sundaram Clayton, Easun Group Companies, Enfield India Ltd., Siva Sailam, Simpson Group, T.S.Santhanam, Sundaram Finance, are hailing from this district. In addition to this, other entrepreneurs from all walks of life have come forward to set up industries ranging from pin making to major plants which take the district to the industrial front.

Industrial Potential

Tirunelveli district has all the basic infrastructure and resources for the development of small scale industries. Further, the incentives given by the Tamil Nadu State Government and various industrial development agencies of the State and the existence of Thoothukkudi Port, SPIC,Thermal Plant and other chemical industries in the adjacent Thoothukkudi district have also added advantage for accelerating the industrial progress of the district. As there are about 22 large and medium scale industries, there is scope for growth ancillary industries, to meet the requirement of these industries, by manufacturing components and spare parts. The food processing industries have more units in the district and the growth of which can be augmented by increasing agricultural production utilising barren and cultivable land and fallow land available in the district. In view of availability of natural and human resources, the chemical, textile and forest based industries have good scope in the district. The industrial policy of the State Government which is aiming at to start new industries in the developing districts, has helped in placing Tamil Nadu in the forefront in the industrial map of the country. Tirunelveli district has joined in the mainstream of industrialisation in a phased manner by availing the subsidies and concessions. The District Industries Centre and other agencies are playing crusial role to achieve this goal.

APPENDIX - 1

Yarn and Khadi Production from 1984-85 to 1993-94

Sl.no.	*Year*	*Yarn nos.*	*Value*	*Beneficiaries Spinners*	*Metres*	*Value*	*No.of beneficiaries Weavers*	*Wages paid* Rs.
1.	1984-85	1880700	765470	970	595870	6574310	450	1970490
2.	1985-86	1940560	974754	950	578360	7027325	410	2368350
3.	1986-87	178350	895960	860	539565	7584320	420	3479630
4.	1987-88	1698470	1194400	840	528370	8079610	390	5126380
5.	1988-89	198680	1325450	870	515850	7089520	380	5684750
6.	1989-90	214790	1494760	870	487680	7578630	360	6269070
7.	1990-91	234230	1684710	855	439810	8175060	350	7438680
8.	1991-92	2071450	1586840	825	428470	8985790	340	8198290
9.	1992-93	1855485	2979690	795	303980	6984370	305	8774650
10.	1993-94	1695894	3147680	750	376570	9874680	357	8965360

Source : Chief Executive Officer, Tamil Nadu Khadi and Village Industries Board, Madras, 2 January 1995.

APPENDIX - 2

Number of Small Scale Industries permanently registered and number of persons employed (Yearwise and Categorywise) from 1988-89 to 1992-93

Sl. no	Category of Industries	1987-88		1988-89		1989-90		1990-91		1991-92		1992-93	
		No.of units	No.of persons employed	No.of units	No.of persons employed	No.of units	No.of persons employed	No.of units	No.of persons employed	No.of units	No.of persons employed	No.of units	No.of persons employed
1.	Agro Based Industries	410	2250	2	7	3	15	6	30	37	178	31	155
2	Forest Industries	168	1070	2	9	4	19	3	17	25	140	23	165
3.	Textile Industries	193	1010	7	33	9	32	11	45	95	570	92	460
4.	Aniimal Industries	37	192	2	7	3	19	2	10	17	98	9	36
5	Mineral Industries	199	1015	3	14	6	32	5	31	31	185	26	130
6.	Chemical Industries	410	6565	30	390	44	660	32	450	61	1115	20	320
7	Engineering Industries	285	1840	101	575	79	474	83	490	96	580	35	205
8.	Electrical Industries	182	935	26	90	21	65	32	140	76	304	48	215
9.	Miscellaneous Industries	341	1984	181	417	163	975	228	1445	62	372	518	2952
	Total	2225	16846	354	1542	332	2291	402	2658	500	3542	802	4638

Source : Figures upto 1987-88 are inclusive of number of small scale units from the inception upto 1887-88

APPENDIX - 3
Handicrafts

Sl. no.	Trade	1990-91 No.of units	1990-91 Persons Employed	1991-92 No.of units	1991-92 Persons Employed	1992-93 No.of units	1992-93 Persons Employed	Areas they are located
1	Embroidery and lace work	–	–	–	3	6	–	–
2.	Metalware	9	27	7	14			
3.	Jewellery	-	-	50	105	1	2	
4.	Bangles and Beads	91	182	72	144	-	-	Ambasamudram and Radhapuram
5.	Conch Shell	66	132	-	-			
6.	Wood Work	3	9	58	116	3	6	
7.	Stone Works	3	3	19	19	4	8	
8.	Bamboo,Cane,Straw etc.	3	9	17	51	6	12	
9.	Flex Fibre	-	-	1	1	-	-	
10.	Paper Machine	-	-	1	1			
11.	Ivory, Horn and Bone	25	50	7	14			
12.	Leather	-	-	2	6			
13.	Musical Instruments	5	10	3	6			
14.	Incence & Perfumery	-	-	2	4			
15.	Pottery	41	123	38	76	-	-	Kallidaikurichi Surandai
16.	Palmyrah articles	324	450	80	150	46	92	Radhapuram
17.	Korai Mats	16	30	119	238	5	10	Pattamadai
18.	Banana Fibre products	2	4	-	-	-	-	

Source : General Manager, DIC, Tirunelveli, report dated 4 October 1993

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CHAPTER - 6

BANKING TRADE AND COMMERCE

Indigenous Banking

Money lending is an old art. It was in practice even in early Aryan days is evidenced by the mention of money lending as one of the four honest callings, the other three being tillage, trade and harvesting. The rate of interest on loans was also specified and usurious rates were condemned. During the Buddhist period, it is said that the heads of trade and merchant guilds were custodians of temple and other charitable funds[1]. In medieval society, temples were centres for all economic activities and they became focal points for social life. The integrative role of temples depended upon converting gifts into ritual goods and services. Temples became institutional money lenders, employers, bankers, landlords, local tax receivers, consumers and centres of production and retail enterprise. Such activities entailed many commercial transactions. This was evident from the fact that temple officers paid cash for oil to light lamps, or for supplies of flowers, ghee, cloth and other items. More important to temple finance, however, was dealt between temples, officials and local land owners. Two early inscriptions show how cash grants to temples by Pandiya kings actually worked commercially. Cash grants to temples at Ambasamudram in the Tirunelveli district became loans from the temples to local assemblies of land owners who in turn contracted to supply exact quantities of goods to the temples on a regular basis. Repayment was to be perpetual, stipulated as interest payments, so that, the principal would never be repaid. In addition to such contracts, temples regularly bought land, loaned out cash for mortgages with possession, and invested directly in irrigation and land reclamation by loaning out funds in return for a share of the increased crop production. In the Ambasamudram grant, the village assembly itself acted as the sole executor. Village assemblies of land owners appeared to have played a dominant role in temple management and finance under Pandyas.[2]

The economy of the Tirunelveli district is mainly agriculture oriented. The need for loans and advances to the agriculturists for the agricultural operations is obvious. Agriculturists depend on the local money lenders for financial requirements during the intervening period between sowing and harvest and also during the vagaries of monsoon. Kallidaikurichi in the Tirunelveli district was the centre of indigenous banking activity and the Brahmins of the place were the principal banking community followed by Vellalas. They owned larger extents of land than other classes. They were more thrifty and enterprising. The Brahmins of the district were known in west coast for their trade and other allied activities. The Vellalas confined their activities mainly to agriculture and local trade in clothes and

groceries. Occasionally, the Vellalas combined money lending and banking with trade.[3] The nature of their transactions was such that they were termed money lenders, rather than bankers. The Brahmins who traded in cloth in Malabar generally combined money-lending with trading. When money lending became more lucrative the cloth trade declined.

About the early history of the Kallidaikurichi Brahmins, it may be said that the system of banking conducted by them was more than a century old. The Brahmins of Kallidaikurichi, were bankers to the Rajahs of Cochin and Travancore. On certain occasions the old and influential bankers received presents from the Rajahs in recognition of the banking sources they rendered during wars and other troublous times.* Since the beginning of the 19th Century, the Kallidaikurichi Brahmins had a network of banking organisations extending over Travancore and Cochin. It was therefore, likely that they might have helped the Rajahs of Cochin and Travancore with money for paying the soldiers and other officers.The Nattukottai Chettiars were the other indigenous banking community in South India. They did a larger portion of their business in Ramnad, Madurai and also in Burma, Malaya and Straits Settlements.

The business of banking consisted in taking money on deposit and also in issuing drafts by which transfer of loanable capital is facilitated. The funds obtained as deposits together with the capital brought into the business by the bankers were employed in making advances, in discounting bills and making investments in gilt-edged securities and a part is kept in cash to meet current requirements. The proportion employed along each of these lines depended upon the circumstances of individual banks. Some of the indigenous bankers discharged all the functions and some a few of them only. They were depositories of spare funds, they issued drafts and allowed cheques to be drawn upon them. The drawing of cheques was not a matter of common practice with some of the indigenous bankers and usually the deposits that the indigenous bankers received did not constitute a large proportion of their working capital.

A practice called *Thulai transaction* was in vogue among the indigenous bankers. As per this practice, an urban financier asked another rural financier carrying on business with his own capital to collect money for the bills he drew on the traders in the village, for goods sent from urban centres to rural parts. The amounts collected by the rural financier was

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* The Rajah of Cochin owed a large sum of money to two bankers in Kallidaikurichi. The debts were given to the Rajah by the bankers' grandfathers probably about the year 1850. They were regularly receiving interest on the amount. On the 'Onam' day, they received presents of clothes from the Rajah. (The 'Onam' is a Malayalee festival observed in the month of August or September).

laid in deposit with him. Against this deposit, the urban financier later on drew bills for making payment to the rural trader for goods sent from the rural tracts to urban centres. The rural financiers who collected money for the drafts sent by the urban indigenous bankers neither did take deposits as a matter of urban business, nor did they discharge the major function of allowing cheques to be drawn upon them. So, they were not bankers by themselves but banker-*cum*-money lenders. There were cases where the financier conducted chit funds, the conducting of which had the same effect as that of receiving of deposits but they must not be classified with money lenders inasmuch as they neither did allow cheques to be drawn upon them, nor undertook to collect money for drafts sent by urban financiers nor helped in the transmission of funds, which were essential functions of bankers. Side by side with them there were money lenders who though did business mainly with their own capital at times took deposit which laid with them for years but they did not allow cheque to be drawn upon them. There was another instance of money-lenders receiving recurring deposits in the shape of contributions towards chit fund. The indigenous bankers of Kallidaikurichi discharged all the functions of banks enumerated above.

The indigenous bankers in the Tirunelveli district called by the name of Hundi merchants and their banks were known as Hundial shops (Hundial Kadai). Their business was commonly known as *Hundiyal Vyaparam* (Hundial trade). In the language of indigenous bankers no rigid distinction was observed between a banker (Hundi merchant) and a money lender. The former normally advanced money on cash credit basis, allowed Hundis to be drawn upon him, received Hundis for collection and financed trade. The latter would finance agriculture, made advances against the pledge of gold ornaments, lent money against the mortgage of house and landed property, allowed cash credit to the artisans and did not usually take deposits. Their daily transactions consist of receipt of interest from customers, repayment of loans taken and advances made against jewels. The agriculturists generally borrow for conducting their agricultural operations or for consumption and pay the principal and interest only after a long interval of time. The clients of the Hundi merchants on the other hand were mostly non-agriculturists depending on occupations other than agriculture and only three per cent of the customers of Hundi merchants were agriculturists.

Organisation of Indigenous Banks

The 'Hundi' or indigenous banking firms did not enjoy a legal status as no provisions existed in the Joint-Stock Companies Act for the registration of these firms, nor the Negotiable Instruments Act accorded it recognition as a bank. The business could be started at any time and, without anybody's sanction and wound up in the same way. Ordinarily if a single person wanted to organise a banking he simply went to the astrologer

to find out an auspicious day. That being fixed, he bought the necessary account books and started his business of banking. If more than one person be involved, an agreement, which was not generally registered, was entered into. The agreement was not generally registered unless the amount involved was large.

One interesting feature that is noticeable in the organisation of Kallidaikurichy bankers is, that it provided for great elasticity both in respect of organisation and dissolution without prejudicially affecting the efficiency of the firm. Another feature is the higher sense of business morality of these bankers and their respect for the decisions of a board committee set up either for settling disputes or conducting liquidation proceedings.

The indigenous bankers did not raise capital by the issue of shares and debentures. No limit was fixed to the initial capital as in the case of joint-stock banks where the nominal is fixed at the time of registration. The partners themselves brought in all the capital, each partner contributing to the pool in accordance with a definite understanding. The amount so contributed by each of the partners was called the initial capital or *Mula Dhanam*. The arrangement was purely on private basis. So, in cases of liquidation by a Court of Law, the Court did not recognise any private understanding between partners and enforce the principle of joint and several responsibility in all such partnerships, if the partnership deed was not registered. Some partners registered the partnership deed specifying whether the liability is to be limited to the amount contributed towards the capital of the firm or to the full amount of the assets of each of the parties, to make their liability certain in cases of liquidation. A conventional proportion was observed between the capital of the business and the total deposits and other borrowings. The proportion of borrowed capital to the owned capital varied in respect of several firms. The Madras Banking Enquiry Committee, 1931, observed that the normal proportion of owned capital to borrowed capital in the case of Kallidaikurichy Brahmin banker was only *1:1* which seemed to be rather a conservative estimate. The working capital of the Kallidaikurichy Brahmins raised partly by overdrafts or limits of borrowing powers which other indigenous banks allowed to them and partly by deposits from members of their own community and a small portion by borrowings from joint-stock banks. In the several centres of trade where goods were bought or sold, the Kallidaikurichi Brahmins had got credit facilities with other indigenous banks functioning in those places. This system of enjoying credit in credit centres was called 'thulai limit' transaction. This system facilitates easy transmission of funds and commodities from place to place. In the working capital, the next item was deposits received from the members of their own community and those received from the members from the outsiders. For these deposits, the interest allowed ranged from four to nine per cent per annum. The

deposits were either backed by promissory notes or by pass-books. The indigenous bankers opened branches with the main object of drawing deposits, saving commission which they would otherwise have to pay to other bankers on bill business, getting temporary accommodation with the Imperial Bank.The branches of Indigenous banks were opened in such a way and in such of those places as to utilise the money all through the year without allowing it to remain idle. Another item in the working capital of the indigenous bankers was the loan taken by them from big landlords. The bigger landlords who had spare cash with them after harvest, advanced the surplus amount to the indigenous bankers for short periods. This was not a regular source to which the indigenous bankers looked for raising the working capital. In a few cases, the indigenous bankers raised the working capital by taking advances of land revenue money from the village munsiffs. This method was resorted to only under extraordinary circumstances. Generally, indigenous banks were housed in rented buildings using only a small portion thereof. The rent paid for the business premises varied from five to fifty rupees per month. The Kallidaikurichy Brahmin bankers borrowed at two to two and a half per cent over the Imperial Bank lending-rate at Chennai and lent their customers at rates ranging from two to four per cent over the rate at which they got accommodation from the Imperial Bank. The actual rate charged by the Brahmin bankers to their customers ranged from nine to fifteen per cent per annum. While the joint stock banks charged ten to fifteen per cent per annum and lent only on securities or joint-signature of approved parties, the indigenous bankers often advanced money to their customers without surety or security. The latter had to meet out this marginal interest of two to four per cent for the establishment charges, rent of premises, bad debts etc.,which took away 1.5 per cent.The report of the Indian Central Banking Enquiry Committee states that out of 2500 towns in India, joint-stock banks and their branches existed in less than 400 places and for banking facilities elsewhere agriculturists, traders, merchants and small industrialists had to depend upon indigenous bankers and money lenders.

The room or the hall in which the bank housed was devoid of furniture. There was no well-ornamented high counter across which payments were made. Coarse country-made mats, in some places carpets, were spread on the floor. For the proprietor, a small cushion was put up by the side of the wall in front of which was placed a small box of wood or steel. In the same room, the clerks were seated at desks close to the walls. The height of the desk was 1/2 feet to 2 feet. Ordinarily, there was only one Cashier. He was paid Rs.50/- to Rs.75/- per mensem as salary. He corresponded to the Aduthal (next man in importance) in the Chettiar bank. He was the well paid employee next to the Agent. Clerks did not wear either shirts or coats but had towels over their shoulders. Some bankers insisted that the staff should come dressed at least wearing a shirt to cover the body. There

were clerks of various grades; the despatch clerk, the letter entry clerk, the bank clerk, journal clerk, etc. To supervise the work in the Branch office there was an agent and in the head office, there was the Proprietor. Extra payments on ceremonial occasions and cloths during marriages were given free to the clerks. The Bank was open for business normally from 6 a.m to 7.30 p.m. and it even worked after 7.30 p.m. All transactions taking place before 9 a.m. in the morning were put to the previous day's account and those taking place after 7.30 p.m. to the next day's account. The Bank year was from Avani to Avani, (Tamil months) i.e., 16th August to 15th August. The banks observed the following holidays. Chitra Vishu (Tamil New Year's Day), Aypasi Vishu (16th October). First of Thai (16th January), Thai Pusham (Full Moon Day in January) and all eclipse days generally and the Bank Year day (16th August) was a partial working day.

Generally the employees were given a month's leave with pay to stay at home in case they had not availed themselves of any leave during the year.This leave did not accumulate. At times, the clerks were forced to take leave to check the work done by them during the year and to find out whether they had shown favouritism to any of the clients of the bank or tampered with the account. In the matter of leave some bankers were liberal and some were strict. The two pieces of banking machinery, the cleaning house and the Bankers' Association, whose main objects were to supply and facilitate the total volume of exchanges and the education of bank staff respectively were absent in the indigenous banking organisation.When the total transactions increased in volume, the clearing houses emerged.

The indigenous bankers got an association which was not confined to bankers alone, but opened to traders as well. This was due to the fact that originally the indigenous banks were traders in cloth.So, the association looked to both the banking as well as the trade interests. Wherever these people did business, they had got local associations going by the name *Samooham Madams*. (*Samooham* is community. *madam* is the meeting place). Meetings were held occasionally to transact common business in the 'madam'. The Kallidaikurichy Brahmins set apart a portion of the profit at the end of each year for *Dharmam* or charity.The amount so collected was spent on the improvements of temples, maintenance of choultries, performance of festivals , etc. The amount was not utilised for reviving a bankrupt.

The indigenous banks received deposits from people not only belonging to their own communities but also from other communities.The different kinds of deposits taken by indigenous bankers were fixed deposits (Thavanai Kanakku) and current deposits (Nadappu Kanakku).The Chettiar called current deposits "Kadai Kanakku". The Kallidaikurichy Brahmins took term deposits for periods varying from six months to six years just as the joint-

stock banks did. Like the Chettiars, the Brahmins also followed one mercantile system of accounting as between members of their own community, while they followed cash loan system in their transactions with people belonging to other communities. The Brahmins had no *Nadappu* rate like the one in vague among Chettiars and the rates were fixed by mutual understanding between parties. Among the Tirunelveli Brahmins and Vaishya money-lenders the *Kandu* rate went by the name Shandi Vaddi (Shandi interest). Under the Kandu system, a loan was granted to be paid in certain definite instalments. Interest on the amount of the loan at the rate settled between the parties was deducted before giving the loan.

Apart from the two specialist banking communities namely the Kallidaikurichi Brahmins and the Nattukottai Chettiars, there were a fair number of independent banking families among such communities as the Labbai Muslims, Nadars, Devangas and Vaniga Chetties. In 1930's urban professionals, the elites of the countryside, and the bankers and merchants who were involved in trade, had accumulated savings.[4] During 1928-29, there were 22 indigenous bankers in urban and 160 in rural areas in the district. The estimated capital and estimated net interest in urban area were Rs.73,80,000/- and Rs.1,40,000/- respectively.[5] In rural areas, the estimated capital and estimated net interest were Rs.,1,58,61,000/- and Rs.10,02,351/- respectively. Some of the prominent town-based bankers were S.N.Subba Iyer, one of the leading Kallidaikurichi firms, S.Venkatachalam Chetty, one of the main dealers in Chillies, A.R.A.S. Doraisami Nadar, a big timber, importer and M.C.Muthukumaraswami Pillai, a big merchant. They went into banking on the profits of the war-time and began to finance the dealings of lessor local merchants.

The English traders that came to India in the 17th Century established English agency houses to conduct banking business besides their commercial business. From this time, the business and power of the indigenous bankers began to wane. Other causes also operated to bring about the decline of the indigenous bankers. The continuous warfare and chaos that resulted from the break-up of the Mogul Empire seriously checked their activities. Further, they lost their profitable money-lending business from 1835, when a uniform currency was established throughout the country. Moreover, the diversion of trade from old to new routes and the change on the basis of India's trade relations with other countries, that were brought about by the development of railways, steamships, post and telegraph, affected their business adversely. The gradual expansion of English trade paved way to the establishment of banks on Western lines in India. Consequently, such banks and Government treasuries came to be established, and they accentuated the decline of the indigenous bankers.[6] The political upheavals and the wars of the 17th and 18th Centuries dealt a severe blow to the indigenous banking system.

Indebtedness

The problem of indebtedness received the attention of people in public life and the Government and constituted the subject-matter of periodical investigation and of legislation. The causes for agricultural indebtedness have been studied time and again. Changes in the socio-economic life of the people and other factors have contributed to the increase of indebtedness.[7] Loans for the carrying on agricultural operations and loans for maintaining the family of the agriculturist cause rural indebtedness. The two are connected in that an insufficient income from the land leads to borrowing for family expenses.[8] The other factors which contributed to this increase are facilities for borrowing and the consequent expansion of credit, ancestral debt, increase of population without a corresponding increase of return from land, poverty with unproductive soil and irregularity of income, ignorance and improvidence, the law of limitation leading to borrowing on usurious terms including compound interest, and the revenue system of a fixed demand. Litigation, village factions, ceremonies, etc., are yet other causes of indebtedness. It has been stated that when there is an increase in the total per capita income owing to increasing trade or manipulation of currency or rise in prices, the volume of indebtedness also increases. This is attributed to the availability of money for lending and of surplus income to repay, "Debt is allied to prosperity and poverty alike; while its existence is due to poverty, its volume is due to prosperity", Owing to the small or uncertain return from land and the small size of holdings, the agriculturist is driven to borrow. "Because he is a cultivator, he must borrow to secure his crop; because his holding is small and has to support more persons than it can feed, he must increase his borrowings to keep these persons alive while his crop is in the ground. His caste and his religion compel him to borrow a third time to meet his customary festival or customary ceremony. As the debt grows repayment of it becomes more difficult until at last some calamity comes upon him, repayment becomes impossible and he sinks into a state of chronic indebtedness from which death alone can release him.[9] From a detailed economic survey of 141 select villages all over Province, W.R.S Sathianathan mentioned in his report on Agricultural Indebtedness, the following purposes for which borrowing was resorted to by ryots.[10] 1) Payment of prior debts (25 per cent), 2) Marriage and other ceremonies (10.5 per cent) 3) Payment of land revenue (3.3 per cent) 4) Relief of distress (6.1 per cent) 5) Agricultural expenses (10.0 per cent) 6) Improvement of land (4.47 per cent) 7) Education of children (1.4 per cent) 8) Trade (12.9 per cent) 9) Purchase of land (13.8 per cent) 10) Construction of houses (5.6 per cent) and 11) Other expenses (6.9 per cent) works out to total 100 per cent.

It appears that 25 per cent of the amount borrowed by the ryots in the villages surveyed was for the payment of prior debts. In fact, it was

the biggest single item in the total borrowings made by the ryots. The purchase of lands accounted for 13.8 per cent. Most of the rural debt was unproductive. The classification reveals that 37.1 per cent for education of children, 12 per cent for trade and 6.9 per cent for miscellaneous purposes.The remedy, however seemed to be by bringing more and more areas beyond the pale of rainfall vagaries and in a gradual rationalisation of domestic expenditure. Debts for productive purposes excluding trade and education accounted for only 37.1 per cent while those for unproductive purposes accounted for 41.7 per cent. A good portion of this amount was for the payment of prior debts and about one-fourth of the unproductive debt was incurred on extravagant expenditure on ceremonies by ryots.[11]

The village money-lender has been occupying an important and influential position in the provision of rural credit. He provides the major portion of the credit requirements of the agriculturists. W.R.S.Sathianathan estimated that 93 per cent of the credit requirements was met by money-lenders who, in rural areas, are mostly agriculturist-*cum*-traders. They own lands themselves and mostly belong to the same community as the ryots of the locality.Their rates of interest ranged from nine to 12 per cent. Loans are given mainly on pre-notes on personal security or periods are fixed for repayment of interest, as well as the banks.Repayments are seldom made at the stipulated time, and so, penal interest is usually charged. The three years' period of limitation for promissory-notes leads to frequent renewals and the new principal is the sum total of the previous principal unpaid interest and penal interest. Naturally, the debt increases very rapidly. After a few renewals, it would not be surprising to find that the original principal has doubled or trebled itself. Finally, this results in a mortgage debt, when the land is mortgaged by the ryot to the money-lender[12]. In a few years, the creditor applies for foreclosure of the mortgage and eventually takes possession of the ryot's land. The ryot loses his land and becomes a tenant or a labourer.

Legislation to regulate and control money-lenders was felt necessary to remove the abuse and exploitation of agriculturists. Such legislations were introduced in the State periodically like the Usurious Loans Act of 1918, the Debtors Protection Act of 1935, the Madras Debt Conciliation Act of 1936, the Madras Agriculturists Debt Relief Act of 1938 and the Madras Indebted Agriculturists (Repayment of Debts) Act of 1955.[13] Due to the enforcements of these Acts and measures taken by Government, the money lending business has been regulated and the usurious rates charged by moneylenders are controlled.

Growth of Financial Institution

With the decline of indigenous banking and the gradual progress of English trade, the need was keenly felt for the establishment of banks. The

expansion of export business and the improvements in transport stimulated local trade as well.[14] Trade and commerce was flourishing and the time was ripe for banks to be established everywhere. The Swadeshi movement that started around 1905 was catching on and led to an outburst of banking activity everywhere in the country. The movement gave a great deal of fillip to the starting of indigenous joint banks. The South Indian Bank was established with headquarters at Tirunelveli in 1903.[15] Several joint stock banks were established for conducting banking business and for financing trade. Bank of Madras was the earliest joint stock bank to be established in Madras. Of the Indian Joint Stock banks operating in Madras, the Premier South Indian Institution is the Indian Bank which was founded in 1907. Among other Banks carrying on business in Madras during 1920's were the Nedungadi Bank, the Palai Central Bank and the Nadar Bank (now Tamilnad Mercantile Bank)[16]. The promoters of the Indian Bank were greatly helped by the fact that there was a climate of opinion in favour of the establishment of the Indian enterprises to replace those owned or managed by the British. The Chettiars were prominent among the promoters of the Indian Bank and merchants belonging to various other communities had also become more numerous and independent in view of the opportunities which were available within the country. Due to absence of a central institution, each bank conducted its business activity in its own way. It showed clearly the defects of India's Free Banking System under which the country had not co-ordinated banking policy.

The Imperial Bank of India established by the amalgamation of three Presidency Banks, took over the business of all the three Presidency banks on January 27, 1921. The formation of the Imperial Bank of India was the most important event in the early twenties. One of the major developments in the inter-war years was that in view of the commanding position and importance of the Imperial Bank of India, the bank rate became relatively more important. It was the rate at which the bank was prepared to grant advances to other banks and to the public generally against Government securities. The formation of the Imperial bank also led to a gradual decline of official interest rates within the banking sector in the Madras Presidency. In every calendar year 1897 to 1919, the average bank rate of the Bank of Madras, taking the busy and lean seasons together, had been consistently higher than the corresponding average rate of Bengal. As there was only one bank rate and one hundi rate the interest rate structure for the south disappeared after this date. With the establishment of Reserve Bank of India in April 1935, the contact with the different kinds of banking institutions and control over the banking business rested with the Reserve Bank of India, which took over the Government accounts, the management of the currency, and became the custodian of bankers' balances.

The earlier banks which had operation in the Tirunelveli district were the Imperial Bank, the South Indian Bank Limited, the Quilon Bank, the

City Bank, the Indian Bank and the National Bank.[17] The economic depression appeared to have encouraged the banks to open more branches with a view to deploying the funds usefully in important centres. The report of the Central Board of directors of the Reserve Bank records that South Indian Banks were more active in extending their branches network during the depression. The expansionist trend in Indian Banking which had been set in motion by the war in 1942 and which had continued up to 1948 came to an end in 1949. From this year up to 1953, there was a contraction in the deposits and profits of banks. The contraction of deposits was due to rising of costs of production and living, high taxation, fall in the earnings of companies and firms, shrinkage in the capacity of the higher and upper middle classes to save etc.[18] The report of the All India Rural Credit Survey Committee, submitted in December 1954, turned out to be very important from the point of view of the banks. It recommended a programme which was to be implemented during the rest of the decade. It led to the nationalisation of the State Bank of India with effect from July 1, 1955 and the reconstitution of the eight major State associated banks as its subsidiaries on various dates between October 1, 1959 and May 1, 1960.[19] This was intended to extend the branch network in the rural areas, to provide assistance to small scale industries and to agriculture, and to enable the State Bank of India to function generally as a second-line Central bank, at places where the Reserve Bank of India was not established. The growth of commercial banking during late 1950's was fairly steady. The passing of the Banking Companies Act 1949 brought changes in the Indian Commercial system, the most being expansion of bank deposits and credit. Planned economic development, and enlarged banking habits led to the increase in bank deposits. The banking system prior to 1969 was studded with myriads of private sector banks. This led to the phenomenon of banks, allowing large credits to big business houses which could afford to give security and guarantees, banks keeping profit as the predominant motive. In this context, the Government of India decided to nationalise 14 major commercial banks with a view to making credit available to every one with productive endeavour, irrespective of the size of the activity or his social status. July 19, 1969 is a red letter day and market almost a new era in the history of Indian banking. From 19th July 1969, fourteen major Indian banks having deposits of more than Rs.50 crores were nationalised.

Later, on 15 April 1980, six more banks having demand and time liabilities of not less than Rs.200 crores were nationalised. The undertakings of these 20 banks are vested into twenty corporate bodies established under the Banking Companies Act, 1970. These banks are now in the Public Sector, being owned and wholly managed by the Government of India through Board of Directors appointed by the Government of Tamil Nadu has been one of the well banked States in the Country and this has contributed to the economic development of the State.

The new branch-licensing policy of Reserve Bank of India, covering the period April 1985 to March 1990, aims at expanding banking facilities in rural areas and aims at a coverage of population of 17000 in the rural and *semi*-urban areas of each block. Nearly four-fold increases in branch network in Tamil Nadu had quite naturally resulted in a swift decline in population per bank branch from 39000 in July 1969 to 12000 in March 1988.

The district has a reasonably well-developed banking system and had 121 branches of 14 public sector banks, 24 branches of eight private sector banks and 49 branches of Pandyan Grama Bank (RRB)during the year 1992-93.The nationalised banks which have banking business in the district are State Bank of India, State Bank of Travancore, Bank of India, Central Bank of India, Canara Bank, Corporation Bank, Indian Bank, Indian Overseas Bank, Punjab National Bank, Syndicate Bank, Union Bank of India, United Commercial Bank and Vijaya Bank. Indian Overseas Bank is the Lead Bank in the district and Pandyan Grama Bank is the Regional Rural Bank.

The private sector banks which are carrying out business in the district are Bank of Madura Ltd., City Union Bank, Federal Bank Ltd., Karur Vysya Bank, Nedungadi Bank, Lakshmi Vilas Bank Ltd., South Indian Bank Ltd., and Tamil Nad Mercantile Bank. Other banking institutions are Tirunelveli District Central Co-operative Bank, State Land Development Bank, Tamil Nadu Industrial Investment corporation and Urban Co-operative Banks.[20] In 1992-93, the Tirunelveli Central Co-operative Bank Ltd. had 18 branches in the district with 172 Primary Agricultural Co-operative Societies affiliated to it. There were eight Primary Land Development Banks and six branches of Urban Co-operative Banks besides a branch of the Tamil Nadu Industrial Investment Corporation (TIIC). The average population per branch office in the district was 11500 which compared favourably with the National average of 13000 and State average of 12000.

The Service Area Approach has been introduced since 1st April 1989 and all the villages (472) in the 19 blocks have been allocated to 154 bank branches operating in rural, and *semi* Urban areas in the district. There are 472 service areas. Block-wise number of bank branches in the district are as follows:

Sl. no.	*Name of the Block*	*Number of branches*			
		Rural	*Semi-urban*	*Urban*	*Total*
1	*2*	*3*	*4*	*5*	*6*
1.	Alangulam	6	–	–	6
2.	Ambasamudram	3	9	–	12

1	2	3	4	5	6
3.	Cheranmadevi	3	5	–	8
4.	Kadayam	6	–	–	6
5.	Kalakad	5	4	–	9
6.	Kadayanallur	4	4	–	8
7.	Kilapavoor	8	–	–	8
8.	Kuruvikulam	8	–	–	8
9.	Manur	5	–	28	33
10.	Melaneelithanallur	8	–	–	8
11.	Nanguneri	8	2	–	10
12.	Palayamkottai	7	13	–	20
13.	Pappakudi	4	–	–	4
14.	Radhapuram	7	3	–	10
15.	Sankarankoil	3	5	–	8
16.	Shencottai	4	3	–	7
17.	Tenkasi	6	6	–	12
18.	Valliyoor	6	6	–	12
19.	Vasudevanallur	4	4	–	8
	Total	105	60	28	193

Bank-wise/Category-wise details

Sl. no.	*Name of the Banks*	*Number of branches*			
		Rural	*Semi-urban*	*Urban*	*Total*
1	*2*	*3*	*4*	*5*	*6*
1.	State Bank of India	5	8	2	15
2.	State Bank of Travancore	–	3	1	4
3.	Bank of India	–	1	–	1
4.	Canara Bank	7	11	2	20

1	2	3	4	5	6
5.	Central Bank of India	3	2	2	7
6.	Corporation Bank	--	1	1	2
7.	Indian Bank	2	8	3	13
8.	Indian Overseas Bank	24	20	4	48
9.	Punjab National Bank	1	2	1	4
10.	Syndicate Bank	–	–	1	1
11.	UCO Bank	1	–	1	2
12.	Union Bank of India	1	–	1	2
13.	Vijaya Bank	–	–	1	1
	Sub-Total	44	56	20	120
Private sector banks					
1.	Bank of Madura	7	1	1	9
2.	City Union Bank Ltd.	–	–	1	1
3.	Federal Bank Ltd.	–	–	1	1
4.	Karur Vysya Bank	–	1	–	1
5.	Lakshmi Vilas Bank.	1	–	1	2
6.	Nedungadi Bank Ltd.	–	–	1	1
7.	South Indian Bank.	–	–	1	1
8.	Tamil Nad Mercantile Bank Ltd.	5	2	1	8
	Sub-Total	13	4	7	24
	Pandian Grama Bank	48	–	1	49

The above statement reveals that among the 13 Public sector banks, Indian Overseas Bank had large number of branches in the rural (24), semi-urban (20), and urban four areas followed by Canara Bank which had 11 branches in *semi*-urban and seven branches in rural and two in Urban areas, Indian Bank had eight branches in *sem*i-urban, three in urban and two in rural areas. Other public sector banks had only a very few branches in the district.

Among the private sector banks, Bank of Madura Ltd. had nine branches, seven in rural areas and one each in *semi*-urban and urban areas

followed by the Tamil Nad Mercantile Bank Ltd.,which had eight branches, five in rural, two in *semi*-urban and one in urban areas. Pandian Grama Bank had 49 branches, 48 in rural and one in urban areas. Statement showing the purpose-wise and bank-wise allocation is shown in *Appendix - 1.*

Category-wise bank branches as on 31 March 1993

Sl. no.	*Public Sector Banks*	*Rural*	*Semi-urban*	*Urban*	*Total*
1.	State Bank of India	5	8	2	15
2.	State Bank of Travancore	–	3	1	4
3.	Bank of India	–	1	–	1
4.	Canara Bank	7	11	2	20
5.	Central Bank of India	3	2	2	7
6.	Corporation Bank	–	1	1	2
7.	Indian Bank	2	8	3	13
8.	Indian Overseas Bank	24	20	4	48
9.	Punjab National Bank	1	2	1	4
10.	Syndicate Bank	–	–	1	1
11.	UCO Bank	–	1	2	3
12.	Union Bank of India	1	–	1	2
13.	Vijaya Bank	–	–	1	1
14.	Bank of Baroda	–	1	–	1
	1st Sub-Total	44	57	20	122

Private sector banks

Sl. no.	*Name of the Banks*	*Rural*	*Semi-urban*	*Urban*	*Total*
1.	Bank of Madura Ltd.	7	1	1	9
2.	City Union Bank Ltd.	–	–	1	1
3.	Federal Bank Ltd.	–	–	1	1
4.	Karur Vysya Bank Ltd.	–	1	–	1

5.	Lakshmi Vilas Bank Ltd.	1	–	1	2
6.	Nedungadi Bank Ltd.	–	–	1	1
7.	South Indian Bank	–	–	1	1
8.	Tamil Nadu Mercantile Bank Ltd.	5	2	1	8
	2nd Sub-total	13	4	7	24
	Pandyan Grama Bank	48	–	1	49
	1st Sub-total	44	56	20	121
	Grand-Total	105	61	28	194

Category-wise bank branches as on 31st March 1994 in the district

S.no.	*Public Sector*	*Rural banks*	*Semi-Urban*	*Urban*	*Total*
1.	State Bank of India	5	8	2	15
2.	State Bank of Travancore	–	3	1	4
3.	Bank of Baroda	–	1	–	1
4.	Bank of India	–	1	–	1
5.	Canara Bank	7	11	2	20
6.	Central Bank of India	3	3	2	8
7.	Corporation Bank	–	1	1	2
8.	Indian Bank	4	8	3	15
9.	Indian Overseas Bank	24	20	4	48
10.	Punjab National Bank	1	2	1	4
11.	Syndicate Bank	–	–	1	1
12.	UCO Bank	1	–	1	2
13.	Union Bank of India	1	–	1	2
14.	Vijaya Bank	–	–	1	1
	Total	46	58	20	124

It is revealed that the Indian Overseas Bank, which is the Lead Bank in the district had opened a large number of branches (48) in the rural, *semi*-urban areas numbering 24, 20 and four respectively followed by the Canara Bank (20) and State Bank of India (15). Canara bank had two branches in urban 11 branches in the semi-urban and seven branches in the rural areas. State Bank of India had two branches in Urban, eight branches in *semi*-urban and five branches in the rural areas.

Distribution of private sector banks

Sl. no.	*Name of the Bank*	*Rural*	*Semi-urban*	*Urban*	*Total*
1	*2*	*3*	*4*	*5*	*6*
1.	Bank of Madura	7	1	1	9
2.	City Union Bank	–	–	1	1
3.	Federal Bank	–	–	1	1
4.	Karur Vysya Bank	–	1	–	1
5.	Lakshmi Vilas Bank	1	–	1	2
6.	Nedungadi Bank	–	–	1	1
7.	South Indian Bank	–	–	1	1
8.	Tamil Nad Mercantile Bank	5	2	1	8
	Total	13	4	7	24

Under the Private Sector Banks, Bank of Madura had nine branches, seven in rural, one each in *Semi*-urban and urban areas followed by Tamil Nad Mercantile Bank which had eight branches, five in rural, two in *semi*-urban and one in urban areas. Pandian Grama Bank which is a Regional Rural Bank in the district had 49 branches - 48 in rural and one in urban areas. The State Land Development Bank had eight branches comprised of three in rural, four in *semi*-urban and one in urban areas. Tirunelveli District Central Co-operative Bank had five branches in rural, 15 in *semi*-urban and two in urban areas, making the total to 22. There are six urban co-operative banks spread over the *semi*-urban areas. Tamil Nadu Industrial Co-operative Bank and the Tamil Nadu Industrial Investment Corporation have one branch each in urban areas.

The block-wise functioning of branches reveals that the Palayamcottai block had 25 branches followed by Ambasamudram having 16 branches; Tenkasi had 14 branches; Cheranmahadevi and Nanguneri had 12 branches each; Valliyoor and Radhapuram 11 branches each; Vasudevanallur,

Sankarankoil and Kalakad have 10 branches each. Pappakudi had minimum number of branches, i.e.four., Manur block had only five branches. Tirunelveli urban had the highest number of 36 branches. After the introduction of the new concept of service area approach since 1 April 1984 all the villages in the 19 blocks had been allocated to 157 bank branches operating in rural and *semi*-urban areas in the district. The average population per branch office in the district was around 11500 which compares favourably with the national average of 13000 and State average of 12000 per branch. The annual target envisaged under Agriculture sector up to the end of March 1994 was Rs.64.74 crores and the achievement was Rs.68.79 crores which was 106 per cent of achievement under this sector. Under short term crop lending the amount disbursed was Rs.49.95 crores as against the annual target of Rs.45.03 crores which was 111 per cent achievement. Under term loans, the target was Rs.10.43 crores whereas the achievement was Rs.9 crores, i.e. 86 per cent of the target. Under plantation and horticulture lending, the allocation was Rs.1.35 crores and the achievement was Rs.1.57 crores. i.e 116 per cent. Under allied activities, the allocation was Rs.7.93 crores, whereas the achievement was Rs.8.28 crores which was 104 per cent of the target. Under Industries, the achievement was Rs.20.61 crores which was 101 per cent achievement. Under Services Sector, the achievement was Rs.16.01 crores as against the annual target of Rs.15.03 crores which works out to 106 per cent achievement.[21] Block-wise bank branches in Tiurunelveli as on 31st March 1992 are furnished in *Appendix - 2* and as on 31st March 1994 are given in *Appendix - 3.*

Lead Bank Scheme

Lead Bank Scheme is of great significance from the point of view of the development banking in India and contribution of banking system to economic development. On the basis of the recommendations of the Gadgil Study Group (1968) and the Bankers' Committee, the Reserve Bank of India evolved the Lead Bank Scheme towards the end of 1969. The Lead Bank Scheme is an organised effort on the part of institutional financial agencies to meet the 'Credit gaps' in the rural areas to take care of the needs of the rural population on the basis of an area-approach. It has been assigned certain special responsibilities of identifying credit gaps, centres for branch expansion and preparing bankable schemes to be implemented by all the financial institutions including all banks public sector as well as private sector, credit agencies in the co-operative sector and term lending institutions. The Lead Bank, a consortium leader, has for the first time, brought all financial institutions under one roof with a sense of joint participation in a co-operative sector for the overall economic development of the district. All the districts in the country allocated different lead banks based on regional pattern and resource position. Indian Overseas

Bank is the Lead Bank in the Tirunelveli district. The development of villages and uplifting the rural poor have been continuously receiving the attention of the Government and the bankers. The latest improvements that has been introduced in the Service Area Concept under which each bank branch is entrusted with responsibility of taking care of the entire banking needs of the villages.

Regional Rural Banks (RRBs)

Regional Rural Banks were set up with the main aim of catering credit in rural areas as recommended by the Saraiya Commission (1972). Each R.R.B is sponsored by a Public Sector Bank. The capital is subscribed by the Central and State Governments and the sponsoring bank. The R.R.B provides credit and other facilities especially to the small and marginal farmers, agricultural labourers, artisans and small entrepreneurs in rural areas. Each R.R.B operates within the local limits specified by a notification. The first Regional Rural Bank in Tamil Nadu being Pandyan Grama Bank was established on 9th March 1977.[22] The Pandyan Grama Bank was sponsored by Indian Overseas Bank and this bank is the R.R.B in the Tirunelveli district which had 49 branches in the district in 1991-92 and the number of branches were the same in 1994.

Co-operative Credit Institutions

Co-operative movement was introduced in India in the early years of the 20th Century primarily as a means of helping the poor people. In Tamil Nadu, Co-operation was introduced in 1904 with the enactment of the Co-operative Credit Societies Act, 1904, on the basis of the recommendations of Sir Frederic Nicholson who was placed on special duty by the Government of Madras in 1892 to enquire into the possibilities of introducing a system of agricultural banks.[23] The Act of 1904 provided for the establishment of the rural credit societies. Subsequently, for financing the primary societies throughout the State, the Madras Co-operative Central Urban Bank came into existence in 1905. In 1912, another co-operative Credit Societies Act was passed which paved the way for the formation of societies for purposes other than credit, as well as for the organisation of higher supervisory and financial institutions in the field of credit itself. In 1919, Co-operative became a provincial subject administered by a popular Ministry.[24] This gave a further impetus to the movement and the number of societies registered a substantial increase. After that, the Madras Co-operative Societies Act of 1932, and the Madras Co-operative Land Mortgage Banks Act of 1934 were passed. The Act of 1932 strengthened the hands of the Registrar in dealing with bad societies, for the realisation of money dues to societies. The Act of 1934 enabled the State Government to guarantee the debentures of the Central Land Mortgage Bank, to provide for the appointment of a 'Trustee' on behalf of

the debenture-holders and to the summary recovery of overdues of the Land Mortgage banks. This Act was a land mark in the development of long-term credit in Tamil Nadu. The Madras Co-operative Societies Act of 1932 continued in force for 30 years till it was replaced by the comprehensive Madras Co-operative Societies Act of 1961. The passing of the Co-operative Societies Act - II of 1912 led to an expansion of the movement. New types of societies, such as marketing societies, stores and weavers' Co-operative Societies were formed. Central banks were formed in the districts for financing the societies in their area, and supervising unions were formed for the supervision of rural credit societies affiliated to them.[25]The Madras Government appointed a Committee in 1927 headed by Mr.Townsend. One of the recommendations of the Townsend Committee was the establishment of a Central Organisation for financing the primary land mortgage banks of this State, which were raising the funds by issuing their own debentures. Subsequently, the Madras Central Mortgage Bank was established in 1929. Sir.T.Vijayaraghavachariar Committee (1940) drew guidelines for improving the working of agricultural credit societies, land mortgage banks, Central banks, marketing societies, supervising unions, etc. During 1945-46, a co-operative wholesale store was started for each district as a result of the growth of primary stores.[26]

It was only after Independence that the co-operative movement started a process of rapid expansion and diversification. The successive Five Year Plan in turn promoted the sector as a balancing force of the economy-balancing private and public sectors. Co-operative organisations provide the advantages of large scale organisation to the small farmers, artisans, industrial workers and consumers. The recommendations of the Rural Credit Survey Committee in 1954, provided the basic framework for co-operative policy aimed at developing co-operatives as the principal instrument of rural and agricultural development. The report recommended massive State assistance and participation. As a result of this policy, a wide spread net work of primary agricultural co-operatives was established at the village level. They are affiliated to the District Central Co-operative Bank. Principal sectors of the co-operative movement are agricultural and non-agricultural societies covering farming societies, co-operative marketing societies, weavers'co-operative societies, milk supply societies, store societies, co-operative housing societies, cottage industries societies, fisheries co-operatives, poultry co-operatives, etc.

The co-operative movement in the composite Tirunelveli district was started by the first Registrar of Co-operative Societies, Sir P.Rajagopalachariar and the Vilathikulam Co-operative Society and the Nambipuram Society were first started in 1904. The District Banking Union which financed all the societies in the district was started by

Mr.Hemingway, the then Registrar of Co-operative Societies who had also worked as Collector of the district. At the district headquarters at Kokkirakulam, there was the District Public Servants Co-operative Credit Society Ltd.,was started in 1916, with a building of its own within the Collector's office compound.[27] It helped the public servants in times of need. The building was named as "Viswanath House" in the name of a former Collector who got a site for it. The Deputy Registrar of Tirunelveli was incharge of the Co-operative Department in this district assisted by a Sub-Deputy. There were also co-operative credit unions for auditing the societies accounts.

The earliest co-operative unions and co-operative societies functioning in the district were Nanguneri Co-operative Union, Vannarpet Central Bank Union, Vannarpet Labour Union, Alwarthirunagari Co-operative Society, Sankarankoil Union, Palayamkottai Co-operative Society, Ambasamudram Town Bank, Ambasamudram Co-operative Union and Ambasamudram Central Co-operative Society.[28]

Central Co-operative banks

In the early days of the co-operative movement, co-operative societies were financed by their own deposits supplemented by small loans from the Government. It was realised that these sources were inadequate to meet the demand for agricultural credit, and that loans from the Government could be only a temporary expedient. The need was felt for an agency which could attract deposits from towns and employ them for primary societies.[29] The origin of the Central Banks could be traced to the Madras Central Urban Bank which was started by public spirited individuals in the year 1905 with a view to finance the primary societies throughout the State.[30] As the number of primary societies in the State grew more and as their credit needs became greater, the inadequacy of a single financing agency to serve them was felt and the best way of mobilising local deposits to finance local needs was to organise Central banks in the districts. As a result, Central Banks were formed in all the districts. The Central Banks have been assigned a pivotal position in all the schemes relating to rural credit. To facilitate collection and disbursement of loans to societies and to ensure closer contact with societies and also to tap local deposits, branches have been opened in important areas. When the Central Banks were started in the districts to serve as the financing agencies in their area, the Madras Central Urban Bank gradually withdrew from the districts. In 1917, the Madras Central Urban Bank was made as the Apex Bank. The shares held by the primaries were transferred to the concerned Central Banks.[31]

The Tamil Nadu State Apex Co-operative Bank is the Federation of Central Co-operative Banks in the State. It is the apex agency at State

Level, meeting the short term and medium term credit requirements of the Central Co-operative Banks for the purpose of providing agricultural credit. The short term credit structure consists of three-tier system, the Tamil Nadu State Apex Co-operative Banks at the district level and the agricultural banks, agricultural services co-operative societies and farmers service societies at the village level.[32] As the apex co-operative bank, this Bank routes funds from National Bank for Agriculture and Rural Development (NABARD) for financing seasonal agricultural operations, medium term agricultural purposes, medium term conversion loans, weavers finance and produce pledge loans, etc. It provides refinance support to the Central Co-operative Banks and for various National programmes like IRDP, Special Foodgrains Production Programme, etc.[33] The Central Co-operative Banks are the federations of Primary agricultural co-operative banks and co-operatives of other types in their respective areas.

To render banking facilities in rural areas, the Tirunelveli Central Co-operative Bank was set up on 12th April 1918 at Tirunelveli and subsequently branches were opened in selected centres in the district. As the principal agency for agricultural finance in the district, the Central Co-operative Bank has been disbursing agricultural loan through its affiliated Village Primary Agricultural Co-operative banks. The share capital held by the bank on 30th June 1977 amounted to Rs.133.30 lakhs which included Government share capital of Rs.37.50 lakhs. The deposits held by the bank on 30 June 1977 amounted to Rs.405.75 lakhs. The bank had 25 branches in 1977 in the composite district, while 11 branches had top deposits of more than Rs.10 lakhs, each of the remaining 14 branches had deposits of less than Rs.10 lakhs. There were 352 agriclutural credit societies. The short term loan issued during 1976 was Rs.706.16 lakhs. The acreage covered under paddy by co-operative loans was 46,160 acres in 1976-77. The loans issued to small farmers and landless tenants amounted to Rs.359.86 lakhs. The total number of agricultural families in the composite district in 1977 was 3.52 lakhs, of which the number of families of small farmers including tenants was Rs.2.62 lakhs. The agricultural families covered, as on 30th June 1977 was Rs.2.75 lakhs. All the 25 branches provided jewel loans.[34] In the year 1983-84, there were 860 societies, and 50,161 individuals. The total paid up share capital was Rs.164.74 lakhs, and Government contribution was Rs.50 lakhs. The Reserve fund and other funds amounted to Rs.49.53 lakhs and Rs.154.10 lakhs respectively. The total deposits were Rs.1706.50 lakhs and the total borrowings stood at Rs.812.90 lakhs. The working capital was Rs.3153 lakhs. The loans and advances issued was Rs.5941.86 lakhs.[35] As on 31st March 1993, the Tirunelveli Central Co-operative Bank had 32 branches spread over the district having Rs.541.18 lakhs as share capital and Rs.300.60 lakhs as reserves. The Tirunelveli Central Co-operative Bank had a total deposit of Rs.5861.55 lakhs borrowings to the tune of

Tirunelveli Central Co-operative Bank

Rs.31st 25.50 lakhs; loans and advances amounted to Rs.9146.50 lakhs and investments and working capital stood at Rs.1377.30 lakhs and Rs.11,673.47 lakhs respectively during March 1993.[36] As on 31st March 1992, the Co-operative covered 5,08,000 land holding persons under all sections and 4,33,000 land holding persons under weaker sections. The number of members enrolled under all sections and weaker sections were 3,63,000 and 4,33,000 respectively. Under the all sections category, 1,93,000 were borrowing members through co-operatives out of 4,99,.000 total members representing 38.7 per cent. Similarly, among the weaker sections, 1,05,000 were borrowed members out of 2,70,000 total members accounting 38.9 per cent.[37] There were 172 primary agricultural Co-operative banks (including FSCS, LAMPS and Rural Bank) in the district as on 31st March 1992.The share capital held by the Bank on 31stMarch 1998 amounted to Rs.595.84 lakhs, which included Government share capital of Rs.200/- lakhs. The deposits held by the Bank on 31st March 1998 amounted to Rs.11851.68 lakhs and the total borrowings stood at Rs.2696.95 lakhs. The Bank had 24 branches as on 31st March 1998. Out of this, 23 branches had deposits of more than Rs.50 lakhs and one branch had less than Rs.50 lakhs. There were 171 Primary Agricultural Co-operative Banks. The short term loan issued during 1997-98 was Rs.962.92 lakhs. The acreage covered under paddy by Co-operative loans was 17784 acres in 1997-98. The loans issued to small farmers and landless tenants amounted to Rs.698.68 lakhs. The total number of agricultural families in the district as on 31st March 1998 was 2.97 lakhs, of which the number of families of small farmers including tenants were 2.27 lakhs. All the 24 branches provide jewel loans. In the year 1997-98, there were 705 societies in the district. The total paid up share capital was 595.84 lakhs, and Government contribution was Rs.200/- lakhs.The reserve fund amounted to Rs.610.89 lakhs, and other funds amounted to Rs.52.94 lakhs. The working capital was Rs.24045.89 lakhs. The loans and advances issued was Rs.16899.89 lakhs.[38] The volume of business transacted by the Tirunelveli District Central Co-operative Bank Ltd. from 1983-84 to 1992-93 is given in *Appendix - 4.*

Co-operative Urban Banks

Co-operative Urban Banks are credit institutions providing banking and credit facilities to urban and *semi*-urban population. They have established themselves even in small towns and major panchayats long before the commercial banks started their branch extension programmes. These banks run mostly with their own resources. They are designed to promote credit facilities to the small traders, artisans, middle and professional classes of people for purposes, such as, repairs or addition to house, petty trade, education of children, discharge of prior debts, small scale and cottage industries, and other productive purposes. They have

also undertaken financing of cottage and small scale industries from 1970-71 as per the recommendation of the working group on Industrial financing constituted by the Reserve Bank of India under this scheme.[39] These banks are also providing banking facilities to their customers such as collection of cheques and bills, transfer of funds discounting of cheques and safe deposit locker facilities.There were six Urban Co-operative Banks in the district on 31st March 1992.

The Tinnevelly Junction Co-operative Urban Bank Ltd.

The Tinnevelly Junction Co-operative Urban Bank Ltd., was established in the year 1917 with the object of encouraging thrift, self help among the members, to finance the small scale industries and to undertake the collection of Bills drawn, accepted or endorsed by members. The urban bank lends jewel loans, housing loans, self-employment loans, loans for purchase of consumer durables, loans for petty traders and small scale industries. During 1980-81, this urban bank had 6644 members which increased to 8848 in 1986-87 and 10436 in 1992-93. The share capital in the years 1980-81, 1986-87 and 1992-93 were Rs.3,96,259/- Rs.4,61,388/- and Rs.7,24,526/- respectively. The total deposits in 1980-81, 1986-87 and 1992-93 stood at Rs.32,81,109/-, Rs.89,65,786/- and Rs.1,45,69,363/- respectively. This bank paid loans and advances to its members to the tune of Rs.43,71,218/- in 1980-81. Rs.95,68,342/- in 1986-87 and Rs.1,86,09,733/- in 1992-93.[40] There is a steady growth of members, share capital, deposits and volume of business of the bank from 1980-81 to 1992-93.

Viravanallur Co-operative Urban Bank

The Viravanallur Co-operative Urban Bank was established on 17th September 1913 operating in the areas of Viravanallur, Harikesavanallur and Pudukudi Panchayats. This bank raises funds from the members as well as from the public and issues loans only to members. It also undertakes other banking business, such as collection of bills drawn accepted or endorsed by members and constituents and to discount cheques of approved members. It also acts as agents to other co-operative institutions and insurance companies for collection and disbursement of funds. It undertakes the financing of small scale industries. In the year 1982-83, the bank issued loans to the total amount of Rs.63.81 lakh which doubled within a span of five years i.e.Rs.138.55 lakhs in 1987-88. In the year 1992-93, the amount of loan issued touched a new high of Rs.276.99 lakhs.[41] Allied to agriculture sector topped the list in the priority followed by 'other loan's; çategory. Loans to small scale industries were only a negligible amount. Nearly 78 per cent of the loan amount went to allied to agriculture category and 20.3 per cent to the 'Other loans' category and the remaining to the small scale industries.

State Land Development Bank

Agriculturists require not only short term and medium term credit but also long term credit; while the first two are intended to meet their current cultivation expenses and normal capital investment in agriculture, the long term credit is intended to meet expenditure connected with major land improvement, redemption of mortgages, discharge of prior debts, purchases of lands, etc. The vast expansion of village credit societies during 1920's coupled with inadequate resources of the Central Banks to meet the growing needs of the agriculturists, separate credit organisations to cater to the long term credit needs of the agriculturists, separate credit organisations to cater to the long term credit needs of the agriculturists were conceived. In 1927-28, the Townsend Committee on co-operation recommended the formation of a Central Land Mortgage Bank. Pursuant to this recommendation, a Central Land Mortgage Bank was started for the State in 1929 to raise the funds required by the primary banks by floatation of long term debentures and to finance them for the purpose of issuing long term loans to their members.[42] Land Mortgage banks were renamed as Land Development Banks in the Year 1969.[43]

The Tamil Nadu Co-operative State Land Development Bank (TNCSLD Bank) is the apex institution for all the Primary Land Development Banks constituted for the development of agriculture. This bank has opened branches at district levels and PLDBs have been located at taluk and block level throughout the State and affiliated to the TNCSLD Bank, in the earlier years were advancing loans for non-development purposes in order to relieve the indebtedness of the farmers. With the Five Year Plans formulated to increase agricultural production, LD Banks started giving loans for development purposes. The loans are advanced on the security of the lands. Land Development Banks are issuing loans for purchase of milch animals, and bullock carts, and for sheep rearing, poultry development etc. The Tamil Nadu Co-operative State Land Development Bank raises the required funds for issue of loans to Primary Land Development Banks (PLDBs) by floating debentures. The PLDBs are providing long term finance to the farmers and the repayment period ranges from five years to 15 years for development purposes like digging of wells, installation of pumpsets, plantation crops, diversified purposes like poultry development, dairying, sheep breeding, tyre carts, sericulture, etc., only on schematic basis with the approval of the NABARD. As on 31 March 1992, there were eight Primary Co-operative Land Development Banks in the district.[44]

Employees' Co-operative Societies

The Employees' Co-operative Credit Societies are formed for the benefit of the salaried people and wage earners. Their objectives are to encourage the habit of saving, and to save them from the clutches of

private money-lenders by providing loans on reasonable terms at a reasonable rate of interest. These sociaties are formed for the employees of the State and Central Governments Establishments, Commercial undertakings, local bodies, factories, mills, colleges, schools, etc.[45] These societies inculcate the habit of thrift among members to enable them to provide for their future. Loans are sanctioned to a member on the surety of another member, up to eight times of the gross salary or six times of the share capital invested by him subject to a maximum of Rs.15,000/-. Besides the surety loan, societies having thrift deposit to a specified limit are permitted to issue further loan up to Rs.7500/- for purchase of durable consumer articles, house sites, etc.There were 65 Employees' Co-operative Credit Societies in the district as on 31st March 1992 and activities of some of them are narrated in the succeeding pages.

The India Cements Employees' Co-operative Stores Limited

The India Cements Employees Co-operative Stores Ltd., started its business on 24th January 1950 with the object of selling to its members at reasonable rate of all articles of consumption, other domestic requirements and necessaries of life. The main store is situated at Sankar Nagar. Branches at India Cements Employee, New Colony, West Thalaiyuthu and North Thalaiyuthu are functioning. The Store is also running five fair price shops through which controlled commodities are sold to the members as well as to the public residing at Thalaiyuthu, Naranammalpuram panchayats and Sankarnagar township. The controlled and non-controlled commodities are sold at credit basis to the members and by cash to the public. Commodities are sold at credit basis to the India Cements Ltd., the Institute of Sankar Polytechnic Hostel and the India Cements Employees Canteen. Fair Price shops are implementing the Old Age Pension Scheme under which rice is supplied to the people selected under the scheme text books to the students for the first standard to SSLC are sold. In 1977-78, the Stores had 1202 'A' Class members and 451 'B' Class members. By 1980-81, this strength increased to 1400 and 511 respectively. In 1991-92, the number of both the 'A' Class and 'B' Class members was reduced to 1138 and 161 respectively.[46]

The Madura Coats Employees Co-operative Thrift and Credit Society

The Madura Coats Employees Co-operative Thrift and Credit Society was started functioning from 7th June 1958 at Vickramasingapuram in the Ambasamudram taluk and its operation covers about 16 km. surrounding Vickramasingapuram. The objects of the society are to mobilise funds from members to be utilised for members, to set as agent for the joint, purchase of the domestic and requirements of the members and to encourage thrift, self-help and co-operation among members. The society has thrift deposits amounting to Rs.25,31,740/- recurring deposits Rs.27,225/- and

savings deposits Rs.47,354/-. This society provides medium term loans for Rs.12000/- to be recovered in 32 instalments, festival loans, loans for family expenses, liquidation of prior debts, education of the children of the members. The working capital of the society in 1993 was Rs.47,21,859/-. It had 1082 members in 1980-81 and 1306 in 1985-86.The membership decreased to 1132 in 1992-93. The share capital in 1980-81 was Rs.3,56,990/- in 1985-86 and in 1992-93, this increased to Rs.17,59,590/-.[47] These features indicate the development as well as the financial growth of the society.

The South India Co-operative Spinning Mills Employees Co-operative Stores Limited

The South India Co-operative Spinning Mills Employees' Co-operative Stores Ltd., was started on 12th May 1963 at Pettai, a suburb of Tirunelveli. The employees of the Spinning Mill are enrolled as members of the Co-operative Stores Ltd. There were 1338 members in 1992-93 with a paid up share capital of Rs.364740/- against 410 members in 1962-63 with a share capital of Rs.4100/-. This store arranges selling all articles of consumption, other domestic requirements and necessaries of life to its members at reasonable rates. The stores have undertaken the public distribution of essential commodities to its members holding family cards through the fair price shop run by the Stores.[48]

The Tirunelveli Palayamcottai Co-operative Housing Society Ltd.

The Tirunelveli Palayamcottai Co-operative Housing Society Ltd., was established in the year 1959 for providing long term finance from 7 to 18 years for construction of dwelling houses considering the member's age, owning of house site, etc. The activities of the Co-operative Housing Society are restricted to Tirunelveli, Palayamcottai and Melapalayam areas.[49]

Other Co-operative Societies functioning in the district as on 31 March 1992, were five Agricultural Producers Co-operative Marketing Societies, one vegetable Growers' Co-operative Marketing Society, six Tenant Farming Co-operative Societies,two Lift Irrigation Co-operative Societes and eight Labour Contract Co-operative Societies (including stone crushing societies) and three other miscellaneous types of societies.

Primary Cooperative Stores[50]

There were 43 Primary Cooperative Stores functioning in the district during the year 1990-91 and the defunct of the Kadayanallur. East Cooperative Stores in 1991-92; the T.V.S.Employees Cooperative Stores in 1996-97 and the Karukurichi Cooperative Stores in 1997-98 resulted the number of primary cooperative stores to 40. The total sales of the primary cooperative stores in the district in 1989-90 was Rs.1851.34 lakhs

and in 1995-96, it was Rs.3120.92 lakhs. The total sales stood at Rs.5368.01 lakhs in 1996-97 and it decreased to Rs.4767.75 lakhs in 1998-99. The total sales of primary sales cooperative societies between 1989-90 and 1998-99 are furnished below:

Sl.No.	*Year*	*Total Sales* (Rs. in lakhs)
1.	1989-90	1851.34
2.	1990-91	2115.27
3.	1991-92	1371.44
4.	1992-93	2538.59
5.	1993-94	2818.05
6.	1994-95	3036.15
7.	1995-96	3120.92
8.	1996-97	5368.01
9.	1997-98	4760.72
10.	1998-99	4767.75

INSURANCE COMPANIES

Life Insurance in its modern form came to India from England. Authoritative data on Indian insurance began to be recorded for the first time in 1914 when the Government of India started publishing the returns of life insurance companies in India. During 1818, an Insurance company named the Oriental Life Assurance Company was started in Calcutta mainly by Europeans. Eventually this company failed in 1834 and was transformed into the New Oriental. Bombay Life Assurance Company was founded in Bombay on the 1st May 1823. Madras Equitable was founded in 1829. Madras Widows was started to 1834.The Tinnevelly Diocean Council Widows' Fund of Madras started operations in 1849.[51] The work done between 1818 and 1870 laid the foundation for the writing of Life business in India on Scientific lines and paved way for promotion of Indian Companies.The 1896-1912 period was vital in the history of Insurance in India. The Insurance companies were governed by the 1866 Indian Companies Act.

The Swadeshi Movement of 1905, the Non-Co-operation Movement of 1919 and the Civil Disobedience Movement of 1930 were milestones in the history of Indian insurance as these movements were primarily

responsible for eliminating a substantial amount of foreign competition. The Indian Life Assurance Offices Association was founded in 1928 which rendered yeomen service to its members and was very useful to the Government as a representative body of insurance interests which it could consult,s when considering legislation for the regulation of insurance, as in 1928, 1938, and 1950. The nationalisation of Life Insurance was another milestone on the road that the country has chosen in order to reach its goal of a socialistic pattern of society. In 1956, the Life Insurance Corporation of India came into being with the following set up viz., central office, zonal offices, Divisional offices, branch offices etc.

Life Insurance Corporation of India

The Life Insurance Corporation spreads life insurance and provides life insurance protection to the masses at a reasonable cost. It mobilises people's savings through insurance linked savings schemes, invests the funds to serve the best interests of both the policy holders and the nation; conducts business with maximum economy, remembering always that the money belongs to other policy holders; acts as trustees of the policy holders and protect their individual and collective interests. The Tirunelveli district was, earlier, under the purview of the L.I.C Divisional Office at Madurai. The growth of business and increase in the number of policy holders, a new division with headquarters at Tirunelveli was started functioning from 1st April 1992. This growth was mainly due to the insurance awareness among the people which has led to a steep increase in the number of policy holders who are availing the services of L.I.C to a great extent. There are eight branch offices in Tirunelveli district. The first branch was opened at Tirunelveli on 1st September 1956 and the second branch at Tenkasi on 28th May 1962. The branches at Ambasamudram, Valliyur, and Sankarankoil were opened on 20th October 1983, 26th April 1985 and 10th February 1986 respectively.[52]

The table presents the number of branches, date of establishment, no. of policies, sum assured, F.P.I in the year 1992-93 in the district

Sl.no.	*Branch*	*Date of opening*	*No. of policies*	*Sum Assured (in lakhs)*	*F.P.I.*
1.	Tirunelveli Unit-I	1 Sep. 1956	7802	2195.265	43.88
2.	Tirunelveli Unit-II	25 Feb. 1987	4889	1263.590	24.60
3.	Tirunelveli C.A.B.	11 Dec. 1991	1931	406.570	6.29

4.	Valliyoor	26 April 1985	5098	1415.835	32.85
5.	Tenkasi	28 May 1962	6108	1510.480	34.63
6.	Ambasamudram	20 Oct. 1983	3572	963.265	16.92
7.	Sankarankoil	10 Feb. 1986	5358	1225.025	24.88

Number of policies under various plans 1992-93

Tables showing number of policies under various plans 1992-93; Endowment plans 92/93; Money back group plans 1992-93 and Children Plan 92/93.

		Plans			
Name of the branch		*1*	*2*	*5*	*27*
1.	Tirunelveli Unit - I	1	2	9	7
2.	Tirunelveli Unit - II	–	–	–	11
3.	Tirunelveli C.A.B.	–	3	2	20
4.	Valliyoor	25	2	–	10
5.	Tenkasi	–	2	–	2
6.	Ambasamudram	5	6	1	31
7.	Cheranmahadevi	2	3	–	10
8.	Sankarankoil	–	1	–	8

1. - Whole life WOP

2. - Whole life W.P

5. - Ltd. P.W.life W.P.

27. - Con.whole life WOP'

Number of policies - Endowments plans 92-93

Plans

Name of the branch		*11*	*14*	*48*	*88*	*104*	*105*
1.	Tirunelveli Unit-I	11	4681	–	95	1	8
2.	Tirunelveli Unit-II	48	3200	–	46	1	5

3.	Tirunelveli C.A.B.	–	1233	–	34	–	4
4.	Valliyoor	52	2423	–	14	–	2
5.	Tenkasi	15	3813	–	141	1	18
6.	Ambasamudram	11	3129	–	99	–	2
7.	Cheranmahadevi	7	1351	–	2	–	3
8.	Sankarankoil	4	4133	–	12	–	4

11 - Endowment W.O.P.

14 - Endowment WP

48 - Ltd. Pay Endowment WP

88 - Jeevan Mitra WP

104 - Jeevan Griha DCE WP

105 - Jeevan Griha TCE WP

DCE - Double Cover Endowment

TCE - Triple Cover Endowment

Money Back Group Plans 1992-93

Name of branch	*73*	*74*	*75*	*93*
Tirunelveli Unit-I	113	629	1419	363
Tirunelveli Unit-II	88	325	723	208
Tirunelveli C.A.B	42	103	167	108
Valliyoor	103	771	1113	164
Tenkasi	76	355	757	287
Ambasamudram	70	264	510	236
Cheranmahadevi	10	92	186	133
Sankarankoil	32	210	499	130

73 - Money Back 12 years - WP

74 - Money Back 15 Years - WP

75 - Money Back 20 Years - WP

93 - New Money Back 25 years - WP

Children Group Plans 1992-93

Name of branch	*Plans* 41	92	102	109
Tirunelveli Unit-I	–	2	132	22
Tirunelveli Unit-II	1	–	39	25
Tirunelveli C.A.B.	–	–	45	13
Valliyoor	1	–	23	12
Tenkasi	1	8	42	36
Ambasamudram	–	2	15	20
Cheranmahadevi	–	–	7	22
Sankarankoil	–	–	47	14

41 - CDA 21 yearsWP

92 - New C.D.A. WP

102 - Jeevan Kishore

109 - Jeevan Sukanya

United India Insurance Company Limited

The United India Insurance Company Ltd., is playing an important role in the general insurance business in South India, and particularly in rural insurance activities. It has devised several types of insurance covers for the benefit of the rural sector and also administers social security schemes in the South on behalf of the Government of India like the Personal Accident Social Security Scheme, Rural Hut Insurance Scheme and Solatium Fund Scheme.

In Tirunelveli district, the company operates through its Divisional Office at Tirunelveli and branch offices at Tirunelveli and Tenkasi. The Divisional Office started functioning in the year 1985. The premium income of the Divisional Office for the year 1996-97, Rs.5.23 crores out of which Rs.2.915 crores business was underwritten within the district.[53]

The category-wise break up of premium income is tabled below:

Sl. no.	*Category*	*Rupees in lakhs*
1.	Fire	61.56
2.	Marine cargo	6.16
3.	Marine Hull	0.53

4.	Motor	148.09
5.	Miscellaneous	11.75
6.	Rural	44.71
7.	Misc. NT	18.70
	Total	**291.50**

The major clients serviced by the Company in the district are M/s.Gomathi Mills, Tirunelveli Central Co-opertive Bank, Syed Cotton Mills, Sun Paper Mills, Nellai Co-operative Spinning Mills, Pandyan Grama Bank, Life Insurance Corporation of India, Sundaram Finance, Sakthi Finance, King Beedi and M.K.V.K.Timbers. Motor Insurance is the major thrust of the Company's business in the district. Since this district is predominantly a rural oriented, the company gives priority to rural insurance activities.The company issues master policies for covering cattle and livestock financed by Indian Overseas bank, Pandyan Grama Bank and Tirunelveli Co-operative Centrla Bank. The number of animals insured in the district bv the Company in 1996-97 is 17,166. Besides, the Tirunelveli Divisional Office of the company is also nominated for implementing the Personal Accident Social Security Scheme, Rural Hut Insurance Scheme and Solatium Fund Scheme in the district.

Personal Accident Insurance Social Security Scheme - (PASS)

This scheme was introduced by Government of India from 15th August 1985. When an earning member in the age group 18-60 years belonging to a poor family dies due to an accident (other than accident caused by a motor vehicle) a maximum amount of Rs.3,000/- is payable to the dependants under the scheme, provided the annual family income from all sources is less than Rs.7,200/-. The scheme is operated in close collaboration with the respective State Governments, who when claim arises, make the investigations that are necessary and furnish the required documents for payment of the claim. United India Insurance Company has taken a number of steps to create the degree of awareness among the beneficiaries in rural areas.The scheme does not require payment of any premium of registration. It is enough, if the party concerned files a claim within 180 days from the date of death. Divisional office at Tirunelveli is nominated for this scheme.Up to September 1997 the number of claims settled is 25 and the amount so settled is Rs.7,28,000/-.

Rural Hut Insurance Scheme for very poor families

The Government of India introduced a scheme called "Rural Hut Insurance Scheme" to cover huts and belongings of very poor families in rural areas with effect from 1st May 1988. The scheme is intended for very poor families in rural areas whose annual income is Rs.4,800/- or less.

The scheme covers destruction of huts and belongings by fire and not by any other cause. The amount of compensation payable is Rs.1000/- for hut and Rs.500/- for belongings. No premium is payable by the beneficiaries and no registration is necessary under the scheme. Claim has to be filed within 90 days from the date of destruction. Up to September 1997 the number of claims settled is 738 and the amount settled is Rs.8,04,200/-.

Solatium Fund Scheme

This scheme is implemented by the Company from 1st July 1989 in the district. Under the scheme, a fixed sum of Rs.25,000/- is paid w.e.f. 14 November 1994. In respect of death of any person resulting from a "hit and run" motor accident, and a fixed sum of Rs.12,500/- is paid for a grievous hurt caused by the accident. Up to September 1997, 15 claims were settled amounting to Rs.1,25,500/- and all of them were death claims.

The Oriental Insurance Company Limited

A subsidiary to General Insurance Corporation of India, the Oriental Insurance Company Limited, has a branch office at Tirunelveli functioning from 16 November 1983. The Insurance Company propagates the message of insurance among the rural population in particular and provides them cover against unfortunate events causing monetary as well as physical loss. Over the years the consciousness of the people towards insurance necessity has increased considerably as can be seen from the upward trend in premium in the district.[54]

Details of premium and number of policy-holders from 1984 to 1992-93

Year	*Premium* (Rs. in lakhs)	*Number of Policies*
1984	21.00	8223
1985	23.50	8424
1986	28.20	8929
1987	22.25	9373
1988	33.94	9842
1989-90	35.70	8422
1990-91	49.57	8825
1991-92	60.93	9178
1992-93	72.61	9545

The branch has achieved, during 1992-93, 99.56 per cent documents issuance ratio. The claims settlement ratio was over 60 per cent for 1992-93.

Currency and Coinage

The earliest occasion on the issue of coins with Tamil legend is about the third Century B.C through the inscribed copper coins of Peruvaludi.Next comes the Andippatti hoard of lead coins. It is, therefore, evident that mints were present at least from the 3rd Century B.C. Gold was in use, as the touch-stone, the goldsmith and the gift of ornaments to supplicants are referred to in the Sangam classics. Coins are also referred to as *kasu.* The numerous hoards of Roman coins discovered in several parts of Tamil Nadu indicate that they were received in plenty in exchange for the precious commodities like pepper, feathers, etc., in earlier times.

The mint was called *akkasalai.* A number of references are available to Akkasalisvaram Udaiyar, a deity (Siva) evidently stationed in the locality called akkasalai probably colonised by the workers living around a mint. There is a village Akkasalai formerly part of the Pandyan port Korkai in the composite Tirunelveli district and the temple there bearing the same name was the recipient of a gift from Virapandiya-achariyan, a kammala.[55] The usage of coined money as a medium of exchange accepted in the commercial transaction could be traced with one punch-marked coins in Tamil Nadu. The stray occurrence of punch marked coins in the south led to the question whether these coins were used as a currency in different cultural and chronological contexts. The coins found in hoaras and surface collections were generally dated on typological grounds. Hoard was found at Virasigamani in the composite Tirunelveli district. Tirunelveli site amidst a natural diversity of terrains that have from ancient times formed a lively arena for trade activity. A trade route in use from earliest antiquity connects the region by land northward through Madurai, and another connects it southward through Kanniyakumari to Kerala. The cost has always been open to the extensive trade of the Indian Ocean and most importantly to the nearby island of Sri Lanka.[56]

TRADE

The role of the Tamil trading community expanded together with the rise of the new dynasties of the Pandyas, Sambuvarayars, Kadavarayas and the Vijayanagar. The Tamil merchants articulated a sense of solidarity through trade guilds. Horse trade was carried on by the merchant class under the Pandyas and this led to a process of transformation from an agrarian economy to agro-mercantile economy in the Tamil country. The revenue derived from the customs by the State became an important component of State income. The collection of revenue from the markets

derived by the rulers of the Tamil country at this time also ushered in the birth of the mercantile or commercial era in the Tamil littoral between 1280 to 1500. The first factor that contributed to the growth of Pandyas coastal trade networks was the development of the hinterland particularly in the Vaigai and Tamirabarani riverine basin which in turn helped the ports in the coast to flourish. Secondly, the rise of merchant groups in several pockets channelised the resources from the coastal trade towards the expansion of overseas commerce. The developments in the areas of indigenous trade, markets, merchants, trading networks helped the growth of trade in the region.[57]

Nineteenth century industrialisation made escalated European demand for 'Commercial crops' among which cotton was the main product as a raw material for English cloth manufacture. The Tirunelveli region held particular importance in South India, because it produced high-quality cotton that fetched high prices first in the Company's remittance trade and then in English agency house trade with English and other European manufacturers of cotton cloth. In addition, Government efforts under company and crown to lower transport and communication costs, with both military security and commercial development in view cheapened commodity exchange among the diverse agricultural communities that composed the Tirunelveli region. As a result, rapidly expanding peasant cultivation of cotton for export converged in its effects on the region's economy with steadily increasing production of all varieties of peasant commodity crops. Medieval agricultural, crafts, and trade concentrated in the Tirunelveli wet zone and in the precincts by Brahmadeya communities and temples. Medieval merchant organisations built outposts along the Tamirabarani for long distance trade.[58] Most exchanges in peasant products occurred within small circuits of trade surrounding irrigated communities. The creation of the commercial environment that survived to the beginning of the 19th Century would await the arrival of peasants and warriors who opened the region's internal farming frontiers during Vijayanagar times, from the 14th to 16th Centuries. From the founding of the Nayaks dynasty to 1800, towns grew along major routes of transport and diverse peasant communities were integrated within a regional trade system. Elite consumption, based on profits from trade and from tribute, stimulated urban concentration of artisans, especially weavers in towns that benefited from locally substantial water supplies and paddy crops.Overseas demand had the same effect. First the Portuguese and then the Dutch purchased wet zone products. They paid precious metals, European products, and items obtained in their trade along the Indian coast and other places in the trading world of the Indian Ocean, especially Sri Lanka. In the Tirunelveli wet zone, town-based weavers of cotton cloth obtained their cotton from cotton-growing villages near the river valley both north and south. European contracts for exports encouraged inland traders to make advances for

export supplies. The 1823 census records 24 major market towns in the composite Tirunelveli district, at major road junctions. A dozen large temples held annual fairs with large congregations of merchants and petty traders. There were 35 weekly markets and twice that many small temple festivals with commercial components. Thomas Munro reports in his presentation to Parliament in 1812 that, in India religion and trade are sister arts; the one is seldom found in any large assembly without the society of the other. Six fortified market centres called pettai; protected trade during 18th Century war years. A few villages had several permanent trading establishments of one kind or another. Every community on record supported annual festivals and fairs, and all had some resident non-cultivators who depended for their livelihood upon some form of commerce. There were three levels of trade activity; local, regional and long distance. Local trade engaged petty peddlers and hawkers, who travelled from village to village and from village to town carrying small lands on their heads, getting goods and cash in exchange for their wares, moving to the rhythm of the monsoon. They would appear industy groups, haggling and straggling along with their ragged baskets, at weekly markets at fairs and festivals, and, without fail, on the threshing floor at harvest time. They carried all the little necessities of country life from jewellery to nails, from thread to spices, pins, and salt fish. They also carried item from localities in different parts of the Tirunelveli region, which they obtained through circuits of regional trade between agricultural zones. Trade between zones in the plains, and between plains and both the hills and the sea coast, centre on towns near the hills, on the coast and in the west zone. These towns, with substantial traders, acquired and dispersed goods through exchange networks in their small hinterlands.

The most important towns were Tenkasi, Ambasamudram, Tirunelveli and Nanguneri; in these towns, during the 18th Century, regional governments set up inland customs stations that survived to 1833. Tirunelveli towns and a few towns near gaps in the mountains evolved into exports and import centres for trade networks that stretched outside the region. By land, the region's best long-distance trading partners were territories west of the ghats and due north. By sea, the island of Sri Lanka and parts of call dotting the peninsular coast provided imports and received exports. By bullock and ship, tobacco, cotton, cloth, paddy, jaggery animal hides and pearls travelled far from the region into channels of long distance trade.

After the 18th Century wars were finished, the most serious obstacles to trade lay on the land itself. Irrigation works, paddy fields, rivers and streams and monsoon floods blocked the flow of goods; bullocks carrying loads on their backs to descend into water constantly in order to move from one part of the most productive agricultural zones of the region to another, because there were no bridges of any kind. Outside the wet

zone, though dry lands made transport easier, the monsoons turned the regions most productive block soil into a vast and deep muddy quagmire impossible for many weeks at a time. It is little wonder that British observers unaimously cited roads and bridges as the most important public improvement for commercial development.

Items of local trade in the district C.1820 [59]

Food supplies	*Materials and products*
Grains (paddy, rice, kambu, cholam,ragi)	Cotton
Oils and oilseeds	Cotton thread and cloth
Spices	
Milk product (ghee)	dyes
Palmyra products	wood timber
Jaggery	beams
Jaggery candy	firewood carts tools
Palmyra fruit	palmyra products
Toddy	beans
Arrack	leaves
Garden produce	mats
Tobacco	baskets
Vegetables (Chillies, onions)	coir and coir products (brushes)
Plantains	gunny
Dried vegetables	lime
Plantains	bricks
Dried vegetables	silver
Salt fish	iron ore, crude iron, iron products
Salt	stones bullocks grass, fodder, manure

Imports and Exports from Tirunelveli by land and by sea

Imports to Tirunelveli	By land	Exports from Tirunelveli	By sea	Imports to Tirunelveli
From Travancore		To Travancore	From Travancore	
Coconuts		Tobacco	Betel	
Betels		Cotton	Arecanut	
Tamarind		Cloth	Coconut	
Salt fish				
From Madurai		To Madurai		
Cloth		grain		
Bullocks		salt		
		dyes		
		To India, Europe, Ceylon and other Asian countries	From India, Europe, Ceylon and other Asian countries	
		Conch	Betel	
		Shells	Coconut	
		Pearls	Iron	
		Cotton	Cloth	
		Cloth	Timber	
		Dyes	Bullion	
		Jaggery	Paddy	
		Hides		
		Skins		

Trade Centres of Tirunelveli district

Almost all the economic activities of the State are carried on in the district to a smaller or bigger scale depending on the circumstances favourable or otherwise to the growth or decay of such activities. The factors that contributed to the growth and development of various trades in the different centres in the district are of a permanent and natural character. Artificial stimulus like the patronage of courts to particular kinds of trades in particular centres has not alone much to create trade relationship between one centre in the district with another in the same district or outside the district.

The differences in the peoples themselves, the differences in the stage of industrial and agricultural development, the differences in the resources of respective lands are the main factors that have brought the existence of some of the main centres of trade in the district. For example, Ambasamudram and Tirunelveli situated in the clayey basin of the Tamirabararni basin are important export centres of paddy and other raw products of forests nearby like timber to the regions of Nanguneri. Thisianvilai in the Radhapuram taluk is the place where the exchange of products grown in drier regions round about takes place for those raised in the river valleys of the Tamiraparani.[59a]

The configuration of the district, the differences in soil fertility, the adequacy of roads and railways and convergence of the same in particular places have given rise to another set of trade centres. Tenkasi, Alangulam and Sankarankoil, in the red soil tract are centres which export cotton and chillies and other garden crops in exchange mainly for food crops of cheaper varieties from the clayey region of the Tamirabarani valley. The products of the well used mountains and those of the well developed plains must for ever be different. The full utilization of mountains, therefore, means minerals, cutting wood, collection of minor and major products and conserving the same, fruit culture, mining and quarrying industries. The mountain people want the products of the plains which can only be paid for with those praised in mountains. Such is the trade that now passes between the 'teri' and the adjoining regions. The chief exports of 'teri' are palmyra jaggery, leaves, fibre, and baskets and they import mainly consumption staples like paddy and other manufactured cotton fabrics. The shoreland of Radhapuram taluk has trade with the interior regions of Tenkasi, Ambasamudram, Tirunelveli and Sankarankoil taluks in fish, cereals, salt chanks, and palmyra products.

The trade centres of the district may be divided into those which play an important part in the international commerce, those which play a chief part in the distribution of products from this district to other districts and these which act as centres for the distribution of products between one region and another or between one portion of the taluk and another portion. To this class belong the numerous shandies in the district which are held in many villages.

Cattle are exported to Kerala from the western region of the district. Handicrafts are made by the people of the district. The fine mats of Pathamadai, toys of Ambasamudram and palm leaf products of the coastal parts are famous which attract the foreigners. Fireworks like crackers and safety matches are manufactured in Sankarankoil and Sivagiri taluks. The palm leaf products, some varieties of mats, palm jaggery, fish and lungies are exported to foreign countries. More than a dozen Chamber of Commerce and merchants' association are functioning which coordinate the activities of the merchants and manufacturers.[60]

Onion, a local crop of importance, is exported from this place to Sri Lanka on a large scale. Manufactured articles mainly of cotton brought from Panagudi, Melapalayam, Munnirppallam and other weaving centres nearby are also exported to Sri Lanka. Ambasamudram, Sankarankoil and Kallidaikurichi are some of the other important centres connected with the treatment of cotton mainly and trades in other products raised in and around those places. Ambasamudram, being situated on the great western main road between Tirunelveli and Kerala at a place where the perennial Tamirabarani is crossed by a bridge, at the meeting place of the plains and the hills of the western ghats, it is a very good pouling centre for the agricultural specialities grown in Kadayam, Pavurchatram, and Alangulam and palmyra products of the red soil region of the southern portion of the Tenkasi taluk. Thousands of bales of cotton yarn are exported from Ambasamudram, the products of the Madura Coats at Papanasam. The Cambodia cotton of Sankarankoil area, and cotton even from beyond Sattur and Virudhunagar occasionally, are brought to Vickramasingapuram direct about 6.5 km to the west of Ambasamudram, on the road which girdles the western ghats connecting Tenkasi, Sankarankoil and Srivilliputhur with Ambasamudram. On account of these factors Vickramasingapuram has become an assemblage centre for raw cotton.Hand-woven cloth was exported from Ambasamudram and Kallidaikurichi by rail and road to the Travancore State and other parts of the composite Tirunelveli district. Once the entire trade in cloth of the district with Travancore was in the hands of the Brahmins of Kallidaikurichi. Ambasamudram towels, Ambasamudram and Kallidaikurichi *Muris* and *Mundoos* in the Travancore State were some of the familiar trade names; and these articles command a good market even today.Vagaikulam in the vicinity of Ambasamudram is an important centre in bell-metal industry. Some of the biggest and finest bells and Idols in the well known temples in the State were made here by the local *kannans*.

Tirunelveli town is the centre of the district and is well connected by roads and railways which has made it an important model town. With its satellite town of Pettai, it controls the entire internal trade of the district Grocery trade is mainly concentrated in Tirunelveli and the trade in oils, oil-seeds, and fancy goods is concentrated in Pettai which directly imports the latter from Mumbai and Chennai. The bulk of the inter-taluk exchange of products is done through weekly shandies held in many villages.These shandies are temporary centres of intense trade activity on specified days. This institution called 'Shandies' has greatly influenced the human geography of the region by giving rise to a particular class of traders whose main economic activity is to carry products from one shandy to another. A sort of seasonal rhythm is brought about in the lives of the people of the district by these shandies. A market trader during late 1930's might start from Ambasamudram with paddy to Tisianvilai and sell it there and return with

vegetables, visiting the various shandies on the way to Kalakkadu, Panagudi, Melakallur, Pattamadai and Cheranmahadevi. Kallidaikurichi, etc. The shandy trader do not follow particular course or route. Like a tramp vessel, he visits places wherein he could get business. Thus, the shandy or market trader may return to his place within a week or fortnight, the length of the period depending on the condition of the market on his way. These shandies have further given rise to particular subsidiary occupations like shandy money-lending, shandy broker, etc.

Survey on agricultural commodities in the commercial network was made in 1936 in some of the villages in Tamil Nadu covering Gangaikondan village and neighbouring centres in Tirunelveli district by the Madras University.The survey revealed that in these trade centres, agricultural commodities such as paddy, cumbu, cholam, ragi, gram, gingelly, cotton etc., which were grown around Gangaikondan were sent out annually to the Kayathar market.The local grain merchants who discouraged competitors from outside, visited the village on alternate days during the season. Paddy, a major produce was sent to the Sathankulam market which is in Toothukudi district. The share of the village produce thus sold outside was much larger. The major portion of cotton was sent to outside markets. Many of daily goods needed by the villages were bought from outside. While a part of the produce was traded with neighbouring villages, the major part reached urban markets and was even conveyed to distant places by way of the towns.[61]

Commodities manufactured, exported and imported are furnished below:[61a]

Name of the Town	*Manufactured*	*Commodities Exported*	*Imported*
1	*2*	*3*	*4*
1. Ambasamudram	Toys, beedies, lungies	Appalam, beedies, lungies	Raw materials for weaving, timber
2. Kallidaikurichi	Appalam, lungies, beedies	Appalam, beedies, lungies	Raw materials for weaving, timber
3. Eruvadi	Mats, bricks, slipper	Plantain, mat, coconut	Rubber sheet for slippers, korai weeds
4. Kadaiyanallur	---	Handloom cloth, grapes, matches	---
5. Courtalam	---	Fruits, plants	Rice, wheat, estate ornaments
6. Puliyankudi	Powerloom cloth, matches, beedies	Vegetables, cotton, cloth	Foodgrains, yarn, oil

1	2	3	4
7. Sankarankovil	Handloom goods, milk, beeda	Handloom gods, milk, cotton	Yarn dye chemicals, vegetables, fruits, dhal
8. Shencottai	Gingilly oil, cane furniture,coconut seeds	Coconut, rice, mango	Chillies, red gram, wheat.
9. Tenkasi	---	Coconut, handloom cloth	Jaggery, edible oil, provision.
10. Tirunelveli and Tirunelveli agglomeration			
i. Alaganeri	Khadarn	Paddy	Manure, vegetables
ii. Melanatham	Beedies	Paddy, milk	Manure , vegetables
iii. Melappalayam	Tobacco, goundnut, cotton, yarn	Beedies,groundnut oil,handloom cloths	Tobacco, ground nut, cotton, yarn
iv. Naranammalpuram	Vessels	Rice, vessels	Raw materials for bronze, paddy.
v. Palayamkottai	Edible oil, cement pipes, pins	---	---
vi. Palayamkottur	Pins, crackers, Rcc pipes	Pins, crackers	Manure, raw materials for pin, wood for matches
vii..Pettai	--	--	Red grain, korai weeds, tobacco
viii Sankarnagar	Cement, calcium carbide	Cement, calcium, carbide	Lime stone, coal, gypsum
ix. Tachanallur	Cotton yarn manure, aluminium vessels	Cotton yarn, brass vessels, aluminium vessels	Cotton, brass, aluminium
x. Thalaiyuthu	-- Weeds, tobacco	--	Redgrain, korai
xi. Tirunelveli	--	Paddy, aluminium vessels	---
xii Thisaiyanvilai	Palmyrah fibre, Jaggery	Banana, palmyrah fibre, jaggery	Rice, fish, grocery
xiii Veeravanallur	Agarbathies, yarn	Cotton, yarn spinning, beedies, mat	Cotton, raw materials for beedies, raw materials for mat.

Garnet sand is available in the Radhapuram taluk sea shore areas. It is exported to foreign countries. In 1995, two private persons have obtained mining leases for mining Garnet in the district. Garnet sand is separated from the beach sand and exported.[62] In addition to the casual occasional and festive markets, regulated markets as listed below, have been established in the district.

The important commodities which come to the regulated markets are cotton, chillies, coriander, blackgram, paddy and groundnut. The trend of quantity of commodities arrived to the regulated market showed that Sankarankoil regulated markets received larget arrival during the year 1989-90 which was 1206 M.T followed by Regulated markets at Ambasamudram, Tirunelveli, Pavoorchathiram, Thiruvengadam, Tenkasi, Kadayanallur, Alangulam and so on. The arrivals in the regulated markets at Sivagiri and Valliyoor were 31 M.T and 24 M.T only during the year 1989-90. After yers showed a gradual increasing trend in the arrival of commodities barring certain fluctuations in the intervening years. The total arrival in all the regulated markets was 5518 M.T in 1989-90 which was increased to 6291 M.T in 1993-94 and 12362 M.T in 1994-95. It touched a new high in 1996-97 which was 22139 M.T and the year 1997-98 witnessed a decline which stood at 15685 M.T. The revenue realised in total during the year 1989-90 was Rs.16.43 lakhs which was increased to Rs.35.99 lakhs in 1992-93, it touched a new high of Rs.90.25 lakhs in 1995-96 and the years 1996-97 and 1997-98 showed a decline in revenue which were Rs.71.52 lakhs in 1996-97 and Rs.57.57 lakhs in 1997-98. Statements on quantity and value of commodities arrived and the revenue realised by the regulated markets from 1989-90 to 1998-99 are given in *Appendices-5 and 6.*

Tirunelveli Market Committee

Regulated Markets[63]:

Sl. no.	*Name of the Regulated Market*	*Date of Establish-ment*	*Wholesale business / Mundies*	*Products transacted*
1	2	3	4	5
1.	Sankarankoil	9.4.63	Wholesale/Mundy	Cotton, Chillies Coriander, Blackgram, Paddy, Groundnut.
2.	Tenkasi	11.1.65	Wholesale business	-do-

3.	Ambasamudram	22.3.66	-do-	-do-
4.	Valliyoor	29.10.66	-do-	-do-
5.	Tirunelveli Ramayanpatti	27.7.67	Wholesale/ Mundies	-do-
6.	Pavoorchatram	19.3.76	-do-	-do-
7.	Kadayanallur	20.7.76	Wholesale	-do-
8.	Thisayanvilai	19.11.80	-do-	-do-
9.	Thiruvenkadam	19.2.82	-do-	-do-
10.	Sivagiri	1.2.83	-do-	-do-
11.	Alangulam	1.1.84	-do-	-do-

Cotton is the principal commodity brought to the market followed by chillies, paddy, blackgram, groundnut and coriander. The annual turnover of these commodities in the regulated markets in the district between 1978-79 and 1992-93 are tabled in *Appendix - 7.*

Fair Price Shops

The unique feature of Public Distribution system in Tamil Nadu lies in the involvement of Co-operatives and Tamil Nadu Civil Supplies Corporation at retail level and total elimination of private trade in this system. There are 867 fair price shops (587 in rural and 280 in urban areas) functioning in the district catering to the needs of the cardholders. There are 614814 family cardholders comprising 335297 in rural and 279517 in urban areas in 1996. About 154 fair price shops are under the control of the Tamil Nadu Civil Supplies Corporation Ltd. Twelve sub retail outlets are manned by educated women in the rural areas and 94 branch shops are functioning in the district. Essential commodities such as rice, sugar, wheat, kerosene and palmolein oil/edible oil, are distributed to the cardholders as per the scale of supply laid down by Government from time to time. Boiled rice common, boiled rice fine /super fine and raw rice at the rate of three kg. and six kg. are supplied to each cardholders. Sugar is supplied to family cardholders at the rate of half a kg. per person to the maximum ceiling limit of two kg. per card/per month. Kerosene is supplied at the rate of ten litres in district headquarters; six litres in other municipal areas; five litres in townships and town panchayats and three litres in village areas.[64]

Co-operative Stores

1. Pettai co-operative stores
2. India Cements Employees Co-operative Stores

3. Southern Railway Co-operative Employees Stores
4. South India Spinning Mills Employees Co-operative Stores
5. Diocesen Co-operative Stores
6. Nellai Consumer Co-operative Stores
7. Tirunelveli District Police Department Co-operative Stores
8. T.V.S.Employees Co-operative Stores
9. Sankarankoil Oil Co-operative Stores
10. Sankarankoil Consumer Co-operative Stores
11. Tiruvenkadam Co-operative Stores
12. Vadukkupatti Co-operative Stores
13. Kalingampatti Co-operative Stores
14. Karukurichi Co-operative Stores
15. Pappakudi Co-operative Stores
16. Thirukurunkudi Co-operative Stores
17. Munanchipatti Co-operative Stores
18. Ambasamudram Mini Super market
19. Karukurichi Lakshmipatti Co-operative Stores
20. Cheranmahadevi Co-operative Stores
21. Kalakadu Co-operative Stores
22. Ramanujam Co-operative Stores
23. Panakudi Co-operative Stores
24. Veeravanallur Co-operative Employees Stores
25. Madura Coats Co-operative Employees Stores
26. Mancholai Co-operative Stores
27. Sun paper Mills Co-operative Stores
28. Kadayanallur Public Servants Co-operative Stores
29. Kadayanallur Co-operative Stores
30. Tenkasi Co-operative Stores
31. Kadayanallur Co-operative Stores
32. Sevallarkulam Co-operative Stores
33. Sivagiri Co-operative Stores
34. Sivagurunathapuram Co-operative Stores
35. Nellai Super market

Weights and measures

Uniformity of weights and measures seems to have been attempted in India as early as the Indus Valley Civilisation, but in South India, what

little uniformity existed disappeared when it came under the sway of different rulers. The rule of the Pandyas, the Cholas, the Hoysalas, the Muslims and later the Portuguese meant different weights and measures becoming prevalent in different areas related to weights of different coins in force from time to time, so that, when the British came they found it difficult to assign exact values in terms of British units to the variety of weights and mesures which has gained acceptance in different parts of South India. This diversity in weights and measures in use in different regions created an element of uncertainty in trade and rendered fraud on the part of retail merchants easy and profitable. As early as 1801, the State Government considered it necessary to issue a proclamation directing the introduction of a revised uniform system of weights and measures in Madras.[65] The heaped measure came to stay as a result of proclamation. But, as a piece of legislation, the proclamation never succeeded as it could not be enforced. In 1839, the Madras Government appointed a Committee to adjust the value of the ordinary weights and measures in use in the State to the Imperial Standard and it promptly recommended the use of British Imperial weights and measures to ensure uniformity. But, this was not accepted by the Government of India. In 1947, the State Government attempted uniformity of weights and measures in Government Departments by issuing of a notification; but, this too did not succeed. Every report published by Government which touched on the marketing of agricultural produce in South India had drawn pointed attention to the hardship to the cultivator arising out of a variety of measures and weights prevalent in different regions.

Weights and measures prevalent in the district prior to the introduction of Metric System were as follows :

2 goondoo-manies	=	1 munjaudy (4.1 grains)
20 munjaudies	=	1 Calanjy
44 munjaudies	=	1 rupee (180 grains)
12 calanjies (or 5 1/2 toles)	=	1 pollum
100 pollums (or 550 tolahs) (13.7 lb.)	=	Tolaum or shiroopuddy

The weight called varauhaniday, about 13 1/2 munjaudies or 54 grains, was in use in some northern parts of this district. A toolaum of 144 pollums called Vadapuddy was also in use with its sub-multiples. There was a scale-rod called Vellicale graduated from 1/4 to 50 pollums used for weighting vegetables and other minor articles. For purposes of jaggery trade, there used a larger kind of Vellicole which was graduated from 1 to 7 1/2 maunds of 28 rautals each (rautal) 40 rupees' weight. In some localities, the rautal of 6 58/64 pollums, or 38 tolahs, used were considered

to an equivalent avoirdupois pound. The avoirdupe is pound, is, however, 38.9 tolahs' weight. The seer of 80 tolahs' weight is also in use.[66]

Land Measures

Unirrigated land was measured in chains (shangilies), *irrigated* land in Vitheicottay or seed-cottay. The Tirunelveli tutcha-oole or artificer's yard was 33 English inches, as at Madurai. It was said that 16 country feet were exactly 4 60/64 tutchacoles, or 162 60/64 inches. This would make the 'adoe' or country feet - 10.184 English inches.

Unirrigated Land

The following was the table:

4 17/32 tutcha-coles - 1 rod - 12 7/10 feet (12.4375)

32 rods square $(398)^2$ - 1 chain = 158.404 square feet - 3.3645 acres.

Irrigated land

The following was the table :

7 1/2 tutcha = coles = 1 rod = 20 1/2 feet.

1 square rod of 420 1/4 square feet = 1 puddy or nauzhy (called also in the old accounts a 'goonta').

8 puddies = 3362 square feet -= 1 mercaul or Cooroony.

21 mercaul = 70602 square feet = 1 seed cottay = 1.6208 acres

It was supposed that the puddy of irrigated land was an area which required a puddy to sow. The seer-puddy of Tirunelveli was a measure which when heaped, as in the universal custom, contained 80 tolahs' weight of rice, or about 71 cubic inches including the heap.The Cawny was used in some parts of the district, sub-divided as in Chengalpattu. In some of the old polliems, the Cooroocan was the land measure. It averaged about 1/4 chain, or 4/5 of an acre, but varied so greatly that no definition was possible. During 1880's in the Tirunelveli district Government accounts acres and cents along were in use.

Grain Measures

There was formerly a mercaul of rice, weighing 52 1/2 lb. when struck, and 57 1/2 lb. when heaped. It was sub-divided into twelve 'seer-puddies' of 82 tolahs each. This mercaul has fallen into disuse. Since 1852, the following table and equitalents were found to be in use, commencing with the same *seer-puddy*, a vessel of about 66 1/2 Cubic inches, and containing 75 tolahs' weight of rice, struck and 82 heaped tolerably full:

1 seer-puddy = 82 tolahs or rice, heaped

8 heaped seer-puddies = 1 mercaul (656 tolahs)

21 heaped mercauls = 1 Cottay = 168 seer-puddies

There were two pucka-puddies in use in different parts of the district. One used struck and the other heaped, the former containing120 tolahs of rice and the latter 128. The pucka -puddy was sub-divided into eight blocks. There were also four different mercauls, two used stuck containing respectively, 480 tolahs and 600 tolahs, and two used heaped containing 640 and 704 tolahs respectively. But, orders were issued for reducing these different mercauls to one uniform standard of 600 tolahs. The old seer-puddies were not used in public markets where pucka-puddies and their sub-multiples, stamped according to the Government standards, were alone in use, but seemed to be used in private transactions among land-holders.[67]

Liquid Measures

The pucka-puddy containing 61 ounces of water and its sub-multiples were used in selling milk, cil, and ghee.The regulation of weights and measures continued to be managed by the Board of Revenue's issued executive instructions though legislation attempting at uniformity had proved abortive. In 1891, testing and stamping of weights and measures by a Government agency was introduced with a view to ensure uniformity. In 1893, the State Government recognised the following units as the standard weights: 180 grains = 1 tola; 3 tolahs = 1 palam; 8 palams = 1 seer; 5 seers = 1 visa; 8 visa = 1 maund. In 1913, an representations from the Merchants' Association and Chambers of Commerce, the Government authorised the recognition of the sub-multiples of the old standard maund namely; 1/2 maund; 1/4 maund; 1/2 visa or 1/16 maund; 1/4 visa or 1/32 maund; 1/8 visa or 1/64 maund. In 1948, the Madras Government again attempted legislation to ensure uniformity. Rules were also framed under the Act but enforcement was deferred again, pending the introduction of decimal coinage.

The metric system is the dominant system of weights and measures in the world today. The Government of India decided to adopt the metric system of weights and mesures in 1955. The Indian Coinage (Amendment) Act 1955, divided the rupee into 100 units. The anna and pice coins in circulation continued to be legal tender but their values were to be expressed in the new units. Under the Act which was brought into force on 1st April 1957, the new unit of currency was named 'neya paisa'. Coins had been of the denominations one rupee (100 np.), half rupee (50 np.), quarter rupee (25 np.), 10 np., 5 np., 2 np., and 1np., The old rupee coin had a weight of one tolah and it served a subsidiary purpose as a weight for weighing gold and silver[68] The new rupee coin was given a weight of 10 grams. Other coins have the following weights:

50 np.	=	5	grams
25 np.	=	2.5	grams
10 np.	=	5	grams
5 np.	=	4	grams
2 np.	=	3	grams
1 np.	=	1.5	grams.

A limited number of new coins were brought into circulation on 1st April 1957. It was only in 1958 when the State Government passed the Madras Weights and Measures (Enforcements) Act that the final decision was taken to implement metric reform in the State. This decision followed the Standard Weights and Measures Act of 1956 passed by Parliament and implemented in stages. The Madras Government introduced the metric system of weights in Madras, Chengalpattu, South Arcot and North Arcot districts with effect from 1st October 1958 out of the 13 districts and the remaining districts including Tirunelveli had metric system with effect from 1st April 1960 with a transitional period of two years and became compulsory with effect from 1st April 1962. Metric capacity measures were introduced in the five districts including Tirunelveli from 1st April 1962 with a transitional period of the year, i.e. from 1st April 1963 for making them compulsory. The use of capacity measures became compulsory in the whole State of Madras by 1st April 1963. Linear measures were also introduced in the State with effect from 1st October 1961 and became compulsory on 1st October 1962.

Fairs and Festivals

Festivals found on the changes of the climatic conditions. A considerable portion of the year has been devoted to the solemnization of public festivals at which the people found in the assemblage of multitudes, in the exhibition of games, and in religious pageants and ceremonies. With remarkable growth of various entertainments in the urban and rural areas, such as, cinema, audios, videos, etc., there is a gradual decline in the importance of festivals with the passage of time. Similarly with the growth of trade and commerce and with greater urbanisation, the role which fairs played for the exchange of commodities is bound to be insignificant in the course. Generally fairs are associated with festivals. People, who could save some money for the festive occasion would be willing to spend it on purchasing things at the fairs associated with festivals and in this an intensive trade developed during the last centuries. In Tirunelveli district, as per 1961 Census Report, there were 38 festivals in Sankarankoil, taluk 25 festivals in Tirunelveli taluk, 19 in Tenkasi taluk, 16 each in Ambasamudram and Nanguneri taluks and eight in Sengottai taluk.[69] The following table reveals the number of festivals in the district and the estimated attendance in them.

Cattle Fair, Melapalayam

Sl.no.	*Taluk*	*No.of festivals*	*Attendance (Approx.)*
1.	Sankaranayanarkoil	38	68,100
2.	Tirunelveli	25	80,200
3.	Tenkasi	19	1,17,700
4.	Shencottai	8	6,800
5.	Ambasamudram	16	1,31,500
6.	Nanguneri	16	1,55,500

Tirunelveli taluk conducted the maximum number of fairs every week numbering 12.They attracted attendance of over 12,000. Tenkasi taluk conducted four weekly fairs and attracted 25,000 people. Shencottai, Ambasamudram and Nanguneri conducted two, nine and five fairs respectively and the relative attendance was 700,12,100 and 100. While these fairs generally deal in every item of consumer need in the rural areas, trade in the cattle is the most prominent. Some taluks specialise in certain items. Sankarankoil taluk reveals in goat fairs, Ambasamudram in poultry fairs and Tirunelveli in cart fairs. Unique among all is the daily cattle fair at Sankarankoil taluk. Particulars on the name of the festival, number of days festival held, month, articles sold are shown in *Appendix-8.*

Nidhis and Chit Funds

The Nidhis were originally started as mutual loan societies,[70] but in the course of years they have developed into semi-banking institutions. They receive deposits either in the form of deposits proper, or of withdrawable share capital paid in monthly instalments, and they make loans for all purposes. They are registered under the Indian Companies Act. The loans are generally made to members, but surplus funds are made available to non-members also. Nidhis began in 1858 as mutual societies based on monthly subscriptions stretching over a four to seven year period. Their assets were originally lent only to members and, at the end of the period, the fund was wound up and profits redistributed. A large number of nidhis failed between 1929 and 1933, and those which remained were substantially charged. A few became trading companies and rather more transformed themselves into joint stock banks.

The "Chit Fund" is a loose organization of a small number of people and is a very useful institution for facilitating savings. These savings are pooled together and made available to members in various ways. The Chits are funds subscribed by members at the rate of fixed amount and then distributed to each of the members in turn by a variety of systems, some depending on a simple rota, others on a lottery(in which those successful were omitted from later draws), and some by auction (in which

subscribers offered competitive discounts on the pay-out share). They had their origin in village saving funds, but in the early 20th Century become a common feature of the urban bazaars and afterwards in both urban and rural areas.

The Chit Funds Act, 1982 (Act No.40 of 1982) defines chits thus: "Chits means a transaction whether called chit,chit fund, chitty, kuri or by any other name or under which a person enters into an agreement with a specified numberpersons that every one of them shall subscribe a certain sum of money (or a certain quantity of grain instead) by way of periodical instalments over a definite period and that each such subscriber shall, in his turn, as determined by lot or by auction or by tender or in such. Other manner as may be specified in the chit agreement, be entitled to the prize amount.[71] The Tamil Nadu Chit Funds Rules, 1994 came into force on the 13th April 1984.

Chit is commenced or conducted after obtaining the previous sanction of the State Government within whose jurisdiction the chit is to be commenced or conducted and the chit is registered in that state in accordance with the provisions of the Chit Funds Act. A company shall commence or carry on chit business when it has a paid-up capital of not less than rupees one lakh. Every company carrying on Chit business must maintain a reserve fund and out of the balance of profit of each year as disclosed in its profit and loss account and before any divident on its shares is declared, a sum equal to not less than 10 per cent of such profit may be transferred to the reserve fund. Every draw in a chit is conducted by the foreman in accordance with the provisions of the chit agreement.

The aggregate chit amount, at any time, does not exceed twenty-five thousand rupees in case the foreman is an individual and if the member of partners of the firm or the individuals constituting the association is not less than four than the aggregate chit amount may be a sum of rupees one lakhs. If the foreman is a company or co-operative society, the aggregate chit amount of the chits conducted by it does not own funds of the company of the co-operative society, as the case may be, Chit companies are under the control of the District Registrar (chits) in the district concerned and Inspector-General of Registration, Chennai, is the overall controlling authority of chit companies in the State.

The Chit Funds Companies in Tamil Nadu have formed an association under the name Tamil Nadu Chit Funds Companies Association with headquarters at Tirunelveli with the objective of solving the problems of the chit companies. The proprietor of M/s.Sowdambika Chit Funds Company at Coimbatore is the president, and the Proprietor of M/s.Arunagiri Chit Fund Company, Tirunelveli was the Secretary of the Tamil Nadu Chit Funds Companies Association in 1995. There were 118 members in the Association in 1995.

APPENDIX - 1.

Statement showing the purposewise - Bankwise allocation in 1991-92

Sl.no.	Name of the Bank	Crop Loan	Minor irri-gation	Land develop-ment	Waste Land	Plan-tation and Horti-culture	Seri-culture	Farm Mechani-sation	Dairy Develop-ment
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
1.	Bank of India	5.00	--	--	--	--	--	--	--
2.	Canara Bank	650.00	18.05	14.73	0.45	27.57	--	--	0.09
3.	Central Bank of India	97.00	5.83	1.08	0.22	27.57	0.58	29.95	11.38
4.	Corporation Bank	3.00	--	0.84	--	3.91	0.88	11.18	5.29
5.	Indian Bank	156.00	7.43	4.45	0.23	--	--	0.37	0.47
6.	Indian Overseas Bank	502.00	43.98	7.96	0.70	--	0.87	10.21	6.20
7.	Punjab National Bank	12.00	--	0.48	--	9.52	3.20	77.13	32.13
8.	State Bank of India	195.00	21.25	7.47	0.22	--	--	3.22	0.60
9.	State Bank of Travancore	199.00	4.24	0.30	--	11.30	0.58	40.79	13.18
10.	Union Bank of India	27.00	--	--	--	6.48	--	2.14	1.40
11	United Commercial Bank	18.00	--	--	0.23	5.08	--	1.13	0.85
	Total (1)	1944.00	100.78	37.31	2.05	68.86	6.11	181.53	73.15
12.	Bank of Madura	104.00	3.20	3.06	--	--	0.59	8.52	2.48
13.	City Union Bank	--	--	--	--	--	--	--	--
14.	Karur Vysya Bank	9.00	--	--	--	--	--	1.05	0.07
15.	Lakshmi Vilas Bank	8.00	--	--	--	--	--	2.10	--
16.	Tamilnad Mercantile Bank	67.00	2.20	0.51	0.23	0.15	0.16	9.76	0.88
	Total(2)	188.00	5.40	3.57	0.23	0.15	0.75	21.46	3.43

.. 2..

APPENDIX-1 (contd.)

Sl.no.	Name of the Bank	Poultry	Sheep/ goat	Fisheries	Bio-gas	Non-Farm Sector	Total
		11	12	13	14	15	16
1.	Bank of India	--	--	--	--	0.16	5 25
2.	Canara Bank	3.94	1.82	4.85	3.16	89.48	855.96
3.	Central Bank of India	2.39	2.76	1.21	1.58	44.72	178.05
4.	Corporation Bank	--	--	--	--	13.75	18.44
5.	Indian Bank	1.25	1.21	1.21	6.32	265.39	235.97
6.	Indian Overseas Bank	5.62	0.64	--	--	9.70	26.64
7.	Punjab National Bank	--	34.90	6.07	7.56	231.77	1042.54
8.	State Bank of India	3.95	4.00	2.43	3.99	190.22	494.38
9.	State Bank of Travancore	2.37	0.76	--	0.96	31.92	249.57
10.	Union Bank of India	--	0.08	--	0.48	0.57	43.19
11.	United Commercial Bank	--	--	--	0.32	0.73	34.24
	Total (1)	19.52	46.87	15.77	18.87	674.41	3184.23
12.	Bank of Madura	--	0.75	1.21	0.80	19.91	144.52
13.	City Union Bank	--	--	--	--	2.65	2.65
14.	Karur Vysya Bank	--	--	--	0.24	2.63	12.99
15.	Lakshmi Vilas Bank	--	--	--	--	2.46	12.56
16.	Tamilnad Mercantile Bank	--	--	1.21	0.68	25.78	109.59
	Total (2)	--	0.75	2.42	1.72	53.43	282.31

..3..

APPENDIX - 1 (contd.)

Sl.no.	Name of the Bank	Crop Loan	Minor irri-gation	Land develop ment	Waste Land	Plan-tation crops and Horti culture	Seri-culture	Farm Mechani sation	Dairy Develop-ment
1	2	3	4	5	6	7	8	9	10
17.	Pandyan Grama Bank	413.00	31.22	1.66	0.22	3.81	2.62	0.38	44.90
18.	Tirunelveli District Co-operative Central Bank	2226.00	--	0.48	--	22.27	--	--	6.60
19.	State Land Development Bank	--	10.60	4.26	--	5.84	--	18.05	4.70
	Total (3)	2639.00	41.82	6.40	0.22	31.92	2.62	18.43	56.20

..4..

APPENDIX - 1 (contd.)

Sl.no.	*Name of the Bank*	*Poultry*	*Sheep/ goat*	*Fisheries*	*Bio-gas*	*Non-Farm Sector*	*Total*
1	*2*	*11*	*12*	*13*	*14*	*15*	*16*
17.	Pandyan Grama Bank	1.27	9.39	3.66	10.80	125.39	648.32
18.	Tirunelveli District Co-operative Central Bank	--	12.60	2.43	7.97	43.78	2322.13
19.	State Land Development Bank	--	--	--	0.64	15.20	59.29
	Total (3)	1.27	21.99	6.09	19.41	346.37	3191.74

Source : Tirunelveli District - Credit Plan 1991-92, Indian Overseas Bank, Lead Bank, Regional Office, Tirunelveli

APPENDIX - 2

Number of bank branches in Blocks in Tirunelveli District as on 31st March 1992

Sl.no.	Name of the Block	State Bank Group	Nationalised Banks	Private Banks	RRBSs	DCCBs	SLDBs	Cooperative	TIIC	Total
1	2	3	4	5	6	7	8	9	10	11
1.	Alangulam	--	3	1	2	1	--	--	--	7
2.	Ambasamudram	2	8	--	3	1	1	1	--	16
3.	Cheranmahadevi	--	6	1	1	1	--	2	--	11
4.	Kadayam	1	2	2	1	1	--	--	--	7
5.	Kalakad	1	5	--	3	1	--	--	--	10
6.	Kadayanallur	--	4	--	4	1	--	--	--	9
7.	Keelapavoor	--	3	2	3	--	--	--	--	8
8.	Kuruvikulam	2	2	--	4	--	1	--	--	9
9.	Manur	--	3	--	2	--	--	--	--	5
10.	Melaneelithanallur	1	3	--	3	--	--	--	--	7
11.	Nanguneri	1	4	--	5	1	1	--	--	12
12.	Palayamkottai	3	13	2	3	3	--	1	--	25
13.	Pappakudi	--	2	--	2	--	--	--	--	4
14.	Radhapuram	--	3	3	4	1	--	--	--	11
15.	Sankarankoil	1	6	--	1	1	1	--	--	10

.. 2 ..

APPENDIX - 2 (contd.)

Sl.no.	*Name of the Block*	*State Bank Group*	*Nationalised Banks*	*Private*	*RRBs*	*DCCBs*	*SLDBs*	*Co-operative*	*TIIC*	*Total*
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*
16.	Sengottai	1	3	1	2	1	--	--	--	8
17.	Tenkasi	1	8	2	1	1	1	--	--	14
18.	Valliyoor	2	2	2	2	2	1	--	--	11
19.	Vasudevanallur	--	5	1	2	1	1	--	--	10
20.	Tirunelveli Urban	3	17	7	1	2	1	2	1	35
	Total	19	102	24	49	19	8	6	1	234

Annual Credit Plan 1993-94, Tirunelveli District, Indian Overseas Bank, Lead Bank Office, Tirunelveli, p.6

R.R.B : Regional Rural Banks
D.C.C.B : District Central Co-operative Bank
S.L.D.B : State Land Development Bank
T.I.I.C : Tamil Nadu Industrial Investment Corporation

APPENDIX - 3

Blockwise branches of different Banks in the district as on 31st March 1994

Sl.no.	Name of the Block	State Bank Group	Nationa-lised Banks	Private Sector Banks	RRBs	DCCBs	SLDBs	Urban	TIIC/ TAICO	Total
1	2	3	4	5	6	7	8	9	10	11
1.	Alangulam	--	3	1	2	1	--	--	--	7
2.	Ambasamudram	2	8	--	3	1	1	1	--	16
3.	Cheranmahadevi	--	7	1	1	1	--	2	--	12
4.	Kadayam	1	2	2	1	1	--	--	--	7
5.	Kalakad	1	5	--	3	1	--	--	--	10
6.	Kadayanallur	4	4	4	4	1	--	--	--	9
7.	Keelapavoor	--	3	2	3	1	--	--	--	9
8.	Kuruvikulam	2	2	--	4	--	1	--	--	9
9.	Manur	--	3	--	2	--	--	--	--	5
10.	Melaneelithanallur	1	3	--	3	--	--	--	--	7
11.	Nanguneri	1	4	--	5	1	1	--	--	12
12.	Palayamkottai	3	15	2	3	4	--	1	--	28
13.	Pappakudi	--	2	--	2	--	--	--	--	4
14.	Radhapuram	--	3	3	4	1	--	--	--	11
15.	Sankarankoil	1	6	--	1	1	1	--	--	10

APPENDIX - 3 (contd.)

Sl.no.	Name of the Block	State Bank Group	Nationalised Banks	Private Banks	RRBSs	DCCBs	SLDBs	Urban Banks	TIIC/ TAICO	Total
1	2	3	4	5	6	7	8	9	10	11
16.	Sengottai	1	3	1	2	1	--	--	--	8
17.	Tenkasi	1	8	2	1	1	1	--	--	14
18.	Valliyoor	2	2	2	2	2	1	--	--	11
19.	Vasudevanallur	--	5	1	2	1	1	--	--	10
20.	Tirunelveli Urban	3	17	7	1	3	1	2	2	35
	Total	23	105	28	49	22	8	6	2	234

Annual Credit Plan 1994-95, Tirunelveli District, Indian Overseas Bank, Lead Bank Office, Tirunelveli, p.5

R.R.B : Regional Rural Banks
D.C.C.B : District Central Co-operative Bank
S.L.D.B : State Land Development Bank
T.I.I.C : Tamil Nadu Industrial Investment Corporation

APPENDIX - 4

Tirunelveli District Central Co-operative Bank Limited, Volume of business from 1983 -1998

(Rupees in lakhs)

Item	*1983-84*	*1984-85*	*1985-86*	*1986-87*	*1987-88*
1. Short term loans	347.76	632.56	491.15	271.60	372.47
2. Medium term loans	82.81	196.75	135.28	110.34	81.47
3. Loans to Weaker Sections (Short term and Medium term)	269.37	495.97	416.87	283.02	343.22
4. *Jewel loans:*					
(a) By Branches	90.56	93.72	123.61	82.44	180.60
(b) By Primary Agricultural Co-operative Bank	200.62	181.23	200.22	142.99	342.35
5. *By Non-farm Sector loans Bank*	--	--	--	2.51	3.66
Deposits :					
(a) Co-operative Central Bank Level	1583.34	1851.62	1999.77	1537.57	2086.29
(b) Primary Agricultural Co-operative Bank Level	71.40	87.96	103.01	6.67	126.00
Share Capital:					
(a) Co-operative Central Bank Level	100.47	134.00	142.77	101.45	125.27
(b) Primary Agricultural Co-operative Bank Level	188.92	214.62	235.08	144.28	171.47

APPENDIX-4 (contd.)

Item	*1988-89*	*1989-90*	*1990-91*	*1991-92*	*1992-93*
1. Short term loans	504.10	748.21	812.95	737.22	882.38
2. Medium term loans	149.25	148.00	150.25	125.00	146.51
3. Loans to Weaker Sections (Short term and Medium term)	464.94	591.47	679.38	660.31	731.56
4. *Jewel loans:*					
(a) By Branches	185.93	417.41	394.01	301.38	554.88
(b) By Primary Agricultural Co-operative Bank	381.23	498.78	483.12	720.89	935.17
5. *By Non-farm Sector loans Bank*	25.69	45.56	22.85	24.28	46.44
Deposits:					
(a) Co-operative Central Bank Level	2268.73	2560.17	2786.93	3231.57	3969.65
(b) Primary Agricultural Co-operative Bank Level	189.47	196.25	312.18	389.80	536.66
Share Capital:					
(a) Co-operative Central Bank Level	147.96	179.52	216.25	245.05	260.37
(b) Primary Agricultural Co-operative Bank Level	194.47	214.90	262.31	335.55	357.60

Appendix-4 (contd.)

Item	*1993-94*	*1994-95*	*1995-96*	*1996-97*	*1997-98*
1. Short term loans	913.59	1180.03	968.55	938.18	962.92
2. Medium term loans	172.42	143.59	171.80	247.00	321.27
3. Loans to Weaker Sections (Short term and Medium term)	774.38	877.27	755.36	888.68	1019.95
4. *Jewel loans :*					
(a) By Branches	784.11	989.51	963.92	1329.16	1514.45
(b) By Primary Agricultural Co-operative Bank level	1414.03	2530.61	2290.93	4455.95	5516.41
5. *By Non-farm Sector loans Bank*	85.97	92.21	126.03	154.55	44.29
Deposits :					
(a) Co-operative Central Bank Level	4620.55	5545.75	6821.10	8835.50	11851.66
(b) Primary Agricultural Co-operative Bank Level	707.97	1418.13	2058.40	3364.07	5891.10
Share Capital :					
(a) Co-operative Central Bank Level	275.89	298.07	317.09	344.01	395.84
(b) Primary Agricultural Co-operative Bank Level	455.23	464.89	477.24	497.65	505.86

Source: Special Officer, Tirunelveli District, Central Co-operative Bank Ltd., Tirunelveli, report dated 2nd December 1993 and The Managing Director, Tirunelveli District Central Cooperative Bank Ltd., Tirunelveli, report dated 5th February 1999.

APPENDIX - 5

Arrival of Commodities to the Regulated Markets from 1989-90 to 1998-1999

(Quantity in matric tonnes)

Sl. no.	*Name of the regulated markets*	*1989-90*	*1990-91*	*1991-92*	*1992-93*	*1993-94*	*1994-95*	*1995-96*	*1996-97*	*1997-98*
1	Sankarankoil	1206	1200	1404	1403	1475	2321	2007	2086	2829
2.	Tenkasi	376	1002	404	409	412	1009	707	1211	1113
3.	Ambasamudram	1003	997	785	1037	1008	1545	1205	6885	2645
4.	Valliyoor	24	52	102	118	128	800	1812	1494	1008
5.	Tirunelveli	859	863	1106	1316	1029	2054	1700	3627	2159
6.	Pavoorchathiram	735	603	674	805	811	1205	905	1510	1448
7.	Kadayanallur	348	593	301	303	301	801	696	1410	1202
8.	Thisayanvilai	63	103	245	106	196	675	659	607	972
9.	Thiruvengadam	523	475	186	302	605	1031	901	805	916
10.	Sivagiri	31	91	102	90	134	420	314	1419	502
11.	Alangulam	253	202	205	217	202	501	401	1081	891
	Total	5518	6181	5514	6106	6291	12362	11307	22139	15689

Secretary, Tirunelveli Marketing Committee, Tirunelveli, dated 3 September 1999

APPENDIX - 6

Revenue realised from the Regulated Markets from 1989-90 to 1998-99

(Rupees in lakhs)

Sl no.	Name of the regulated markets	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99
1.	Sankarankoil	6.55	7.03	13.90	14.19	15.15	37.36	35.38	16.51	13.12	24.38
2.	Tenkasi	1.16	1.11	2.83	3.63	2.65	4.91	5.21	6.33	3.85	2.29
3.	Ambasamudram	0.75	0.33	1.77	4.40	2.91	6.47	8.70	13.36	11.81	11.10
4.	Valliyoor	0.52	0.44	1.21	1.03	2.13	5.13	5.38	4.21	4.64	9.10
5.	Tirunelveli	2.70	3.09	6.49	7.52	6.84	16.15	16.53	12.69	8.89	15.90
6.	Pavoorchathiram	1.90	1.90	1.63	2.49	1.60	2.66	2.86	3.00	2.03	5.01
7.	Kadayanallur	0.52	0.37	0.91	0.91	0.65	1.70	1.95	2.53	2.65	2.73
8.	Thisayanvilai	0.19	0.17	2.65	2.51	1.89	4.28	4.34	2.10	1.09	3.36
9.	Thiruvengadam	1.59	0.17	2.36	3.00	4.25	6.42	4.83	3.06	2.58	3.41
10.	Sivagiri	0.08	0.23	1.15	0.50	0.78	2.03	2.40	1.67	1.86	1.53
11.	Alangulam	0.27	0.18	0.70	0.60	0.70	1.68	2.12	1.74	2.36	4.54
12.	Kavalkinaru check post	0.11	0.01	0.01	0.15	0.09	0.13	0.14	0.48	0.36	0.22
13.	Head office	0.09	0.05	--	--	0.11	0.53	0.41	3.84	1.81	0.27
14.	Surandai Sub-regulated market	--	--	--	--	--	--	--	--	0.42	3.50
	Total	16.43	15.08	35.99	40.93	39.75	89.35	90.25	71.52	57.57	87.34

APPENDIX - 7

Tirunelveli Market Committee

Total Turnover in the Important Commercial Centres (Rupees in lakhs)

Sl.no	Year	Cotton	Chillies	Coriander	Blackgram	Paddy	Groundnut
1	1978-79	1926.66	117.63	96.53	115.35	404.58	179.62
2.	1979-80	1695-59	835-50	46.15	126.37	870.78	174.19
3.	1980-81	1630.80	886.71	59.64	135.32	749.51	240.38
4.	1981-82	2605.73	1645.00	63.42	90.54	482.17	226.56
5.	1982-83	1690.02	964.70	101.59	285.46	416.35	194.94
6.	1983-84	1332.19	666.04	880.08	370.98	419.96	181.50
7.	1984-85	2371.04	1749.73	290.90	255.15	352.79	206.43
8.	1985-86	1325.93	717.21	43.82	94.11	1158.51	200.22
9.	1986-87	2025.51	665.35	1550.06	57.43	1139.56	253.03
10.	1987-88	2276.82	515.00	79.20	425.25	125.18	142.69
11.	1988-89	4450.00	2460.40	46.00	544.00	471.75	299.98
12.	1989-90	4200.00	2305.50	131.63	987.14	586.00	222.00
13.	1990-91	3318.61	1556.45	143.82	1003.96	199.95	444.87
14.	1991-92	4428.77	2448.00	69.42	455.12	633.67	1017.34
15.	1992-93	4918.51	1284.52	79.28	479.87	1872.68	201.62

APPENDIX - 8
Some of the Fairs and Festivals

Sl. no.	*Name of the Village/ Panchayat*	*Name of the Festival*	*Total number of days*	*Month*	*Articles Sold*	*Distance• from District Head-quarters* (in kms)
1	*2*	*3*	*4*	*5*	*6*	*7*
1.	Perumal Patti	Ammankoil	3	May / June	Clothes	76
2.	Pandapali	Ammankoil	3	May / June	Clothes	72
3.	Paruvakudi	Ammankoil Pongal	2 1	May / June January	Sweet meats	
4.	Karivalamvandanallur	1. Weekly Fair	1	--	Clothes, mats and sweet meats	
		2. Panguni Thirunal	12	April / May		
		3. Avani Thirunal	13	August / September	Clothes, mats and fancy goods	
		4. Skanda Sashti	7	October / November		
5.	Panaiyoor	Gurupooja	1	April / May	Light refreshments	
6.	Vasudevanallur	Aani festival	10	June / July	Clothes and vegetables	

2

APPENDIX - 8 (contd.....)

1	2	3	4	5	6	7
7.	Narayanapuram	1. Mariamman festival	10	August	Sugarcane, mangoes and other fruits	
		2. Vadakaliamman koilkudai	10	-do-	-do-	
8.	Thiruvengadam	Weekly fair (Sunday)	1	--	Clothes and goats etc.	
9.	Subramaniapuram	1. Vallanaikottai Mariamman koil kudai				
		2. Muthalamman koil Chapparam festival	4	August / September	Mangoes, fruits, sugarcane, puffed rice, cigar and fancy goods	
		3. Mariammankoil Chapparam festival				
10.	Puliyangudi	1. Muharrum festival	1	May/ June	Fancy goods	
		2. Car festival	1	January/ February		
		3. Floating festival	1	-- do --		

..3..

APPENDIX - 8 (contd.)

1	2	3	4	5	6	7
11.	Sankarankoil	Daily cattle fair	--	July / August	Cattle, grocery and fancy goods,	
12.	Vagaikulam	Pongal festival		January	clothes and ornaments	
13.	Madathupatti	Pambakoil	Weekly Fair (Tuesday)	--	Cattle and clothes etc.,	
14.	Veerasigamani	Rajagopalamannar Swamy Koil car festival	10	March / April	Clothes and sweetmeats	
15.	Sivalaperi	Chithirai, cattle fair	15	April	Bullocks and carts	
16.	Rajavallipuram	Sappara Azhagiya Nataraja Temple festival	10	December/ January	Sweetmeats, flowers and fruits	
17.	Naranammalpuram	1. Navarathiri	--	October	Sweet meats, flowers and fruits	
		2. Kudai	--	April		

APPENDIX - 8 (contd.)

1	2	3	4	5	6	7
18.	Manimoorthiswaram	Dasara festival	10	November	Sweetmeats, pops and nuts	
19.	Kilaveeraragavapuram	Bi-weekly fair Tuesday & Thursday	--	--	Cattle, dried fish, textiles, vegetables and earthernware	
20.	Tirunelveli (m)	Nellaiappar car festival	12	June / July	Sweet meats, flowers, fruits and fancy goods	
21.	Reddiarpatti	Thiruvenkadamudayan Perumal koil festival	5	September / October	Grocery	
22.	Gangaikondan	Kailasanathaswami koil festival	1	April / May	Sweet meats, flowers & fruits	
		-- do -- Thirukalyanam	--	October / November		
23.	Krishnapuram	Sri Venkatachalapathi koil Brahmothsavam	11	September / October	Sweetmeats, coconuts, fruits and betelnuts	

APPENDIX - 8 (contd.)

1	2	3	4	5	6
24.	Kadayanallur	Pallivasal festival	2	December	Fancy goods
25.	Urmelalagian	Badrakaliamman koil festival (on Sivarathri day)	1	February/ March	Sweetmeats
		Meenakshiamman koil festival (on Chithirai Full moon day)	3	April/ May	Sweetmeats
26.	Tenkasi	1. Kasiviswanathaswamy festival	10	February/ March	Fancy goods
		2. --do--	10	October/ November	--
		3. Weekly fair (every Sunday)	--	--	Fancy goods
27.	Surandai	Azhagu Parvathiamman koil festival	10	April / May	Grocery
		Weekly fair (every Monday)			

APPENDIX - 8 (contd.)

1	2	3	4	5	6	7
28.	Courtallam Township	1. Kutralanathaswamy koil festival	10	April / May	Sugarcane, fancy goods and sweetmeats	
		2. -- do --		October/ November	-- do --	
		3. Floating festival		December/ January	-- do --	
29.	Mayamankurichi	Bajanaimadam festival	30	December/ January	Light refreshments, garlands, fruits and coconuts	
30.	Shencottai	Weekly fair (every Tuesday)	1	--	Vegetables, fruits, dried fish, earthern wares and foodgrains	
31.	Sambuvadakara	Weekly fair (Friday)	1	--	Vegetables, fish, clothes and earthern wares	
32.	Kilakadayam	Weekly fair (Monday)	1	--	Cattle and vegetables	
33.	Vengadampatti	Mailapuram weekly fair every Tuesday	1	--	Grocery and clothes	

APPENDIX - 8 (contd.)

1	2	3	4	5	6	7
34.	Pudupatti	Weekly fair (every Sunday)	1	--	Paddy and Ragi	
35.	Mukkudal	T.P.Samuinam Sait Weekly fair	1	--	Poultry	
36.	Thiruppudaimarudur	Thai Poosam Festival (festival ends on the Poosam star of Thai month.	10	January/ February	Pooja articles and fancy goods	
37.	Ambasamudram	1. Vaigai festival	10	May / June		
		2. Maasi Thirunal in Urkad Temple	12	February / March	Earthern wares	
		3. Bi-weekly fair Sankarankoil Adi, Thai poosam, Panguni festival, Fair meets on every Thursday and Saturday	2	July/August	Mats and clothes	
38.	Vickramasingapuram	Weekly fair(every Sunday)	---	--	Vegetables	

APPENDIX - 8 (contd.)

1	2	3	4	5	6	7
39.	Kallidaikurichi	Weekly fair festival (every Tuesday)	–	--	Vegetables and earthernwares etc.	
40.	Terkukallidaikurichi	Weekly fair(Tuesday)				
41.	Singampatti	Adi Amavasai at Banatheertham	1	July/August	Pooja articles	
42.	Kallikulam	Arch.Adhisayapani Madhakoil festival	4	August	Puffed rice, bengalgram, Sweets and fancy goods	
43.	Kalakad	1. Car festival 2. Floating festival Daily fair	10 1	May February	Grocery	
44.	Illankulam	Weekly fair (Thursday)	--	--	Vegetables, earthernwares, and sweetmeats	
45.	Ittamoli	Weekly fair (Wednesday)				
46.	Vadakkuvalliyoor	Weekly fair (Friday)				
47.	Tisayanvilai	Weekly fair (Friday)	--	--	Foodgrains, vegetables and grocery	

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